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Editorial.

The Port of Algiers.

Situated on the North African coast, the Port of Algiers is an easily accessible port of call for vessels traversing the Mediterranean. A century ago the Port of Algiers was a comparatively small port, and it is only in recent years that improvements and enlargements on a vast scale have been undertaken.

To-day, Algiers is carrying on a very large trade and compares very favourably with the principal French ports.

Algiers has gained considerable prominence in latter years as a port of call for tourist liners, and the calling of these vessels has considerably increased the necessity for further enlargements, and these are now being undertaken.

An illustrated article on the Port of Algiers appears on another page and forms the supplement for this month's issue.

The Port of Leith.

In the September 1931 issue of "The Dock and Harbour Authority" there appeared on page 341 under the heading of "Scottish Harbour Notes" a notice on the Port of Leith and its world-wide trade, in which it was stated that "In the course of a single year over 1,200 vessels arrived at this port bringing cargo of between 800,000,000 and 900,000,000 tons." This, of course, was palpably a printer's error, the figures really being 800,000 and 900,000 tons.

We are now in a position to give the average figures for Leith for the years, 1927, 1928 and 1929.

Net weight (i.e., exclusive of packages and containers) of imports received from other countries—767,000 tons consisting of 497,000 tons of food, drink and tobacco and 270,000 tons of other commodities. In addition, miscellaneous other articles to the value of £1,222,000 were also received.

The figures of shipping, foreign trade, were—arrivals 1,435 vessels of 1,448,000 net tonnage. Departures 1,527 vessels of 1,467,000 net tonnage.

The foreign shipping entries (as distinct from arrivals) were as follows: 860 vessels (with cargoes) of 620,000 net tonnage and 245 vessels (in ballast) of 316,000 net tonnage.

Galway Harbour Development.

The Galway Harbour Development Committee representative of Galway County Council, Galway Urban District Council, Galway Harbour Commissioners and Galway Chamber of Commerce is concerned at the delay of the Free State Minister of Industry and Commerce in receiving a deputation to discuss the harbour development scheme.

Counsel's opinion in regard to the promotion of the necessary Bill was submitted to a meeting of the Committee, when it was pointed out that this could not be done until the consent of the Minister as to the necessary loans had been obtained.

It was resolved that the Minister should again be written to, pointing out that the delay was detrimental to the promotion of the scheme, which was an urgent necessity if the trans-oceanic trade that had been rapidly developing was to be maintained, and if the delays which had occurred in the docking of transport vessels were to be avoided.

It was decided to place full details before all western members of the Oireachtas.

The need for recent improvements in accommodation at Galway port is proved by the port returns, which show the advance Galway has made in recent years as a sea port. Whereas in 1928 liners landed 1,194 passengers at the port and embarked 482, in 1930 they landed 3,186 and embarked 5,795. Live stock exports rose from 873 head in 1924 to 10,994 in 1930, and in the first seven months of this year it is stated that the ten thousand mark has already been nearly reached. Other exports over the same period have increased from 56,776 tons to 76,160 tons.

The Port of London Authority.

The Twenty-second Annual Report of the Port of London Authority for the year ended March 31st, 1931, contains some interesting facts.

During the year under review there was a total net register tonnage of ships that arrived and departed at the port of 58,085,598. This shows an increase of about 500,000 tons over the previous year. The various totals are given from the year 1919 onwards and show a steady increase in each year, though comparing the figures for 1930 with those for 1919 there is an increase of over 100 per cent.

The value of imports and exports shows a considerable decrease over 1929, there being a drop of £100,000,000, or a percentage decrease of 14.4. The figures were £603,743,000 for 1930 as against £705,237,724 for 1929.

Comparing London's trade with the other five principal ports of the country, viz.: Liverpool, Hull, Manchester, Southampton and Glasgow, the loss shown has not been so great, as in only one other case, that of Glasgow, is a smaller percentage decrease shown.

The working results for the year showed a loss after taking off interest charges from the balance of revenue, the figures being total revenue £5,828,658, total expenditure £4,463,606, leaving a balance of revenue of £1,365,052. After taking off interest on port stock and temporary loans, sinking fund charges, etc., less interest, etc., receivable a total amount of £1,404,782, this left a deficit of £39,731.

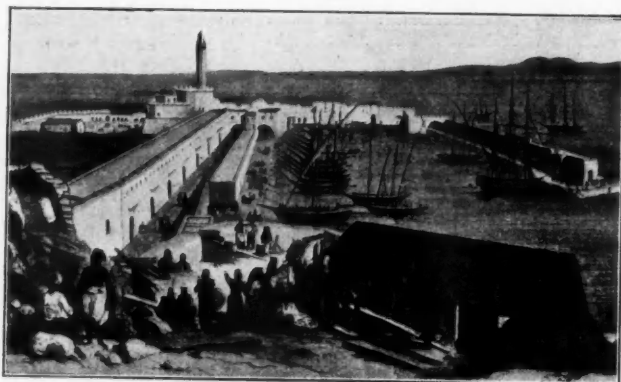
Liverpool's Reply to Southampton.

In view of the amount of ocean passenger traffic that now makes use of the port of Southampton, and the tendency to exaggerate Liverpool's loss, it is worth while bringing the situation into accurate focus by giving the official figures. The Board of Trade returns for liner passenger traffic during last year to the respective ports show that the inward traffic dealt with on Merseyside was 65,496 passengers, as compared with 92,240 at Southampton, while the outward traffic was 91,493 and 126,837 respectively. But Merseyside had in addition huge passenger traffic services to and from Ireland, the Isle of Man, and North Wales. During the last year 1,025,000 people were carried by these services, which showed that Liverpool was ahead of Southampton in regard to the number of passengers conveyed to and from the respective ports. It is, of course, not admitted by Liverpool that, had the Gladstone Dock been opened sooner, she might have retained the traffic that is now cleared at Southampton. The reason for the large passenger liners leaving Liverpool was the fact that the luxury tourists from the United States went to Southampton in greater numbers because it was the nearest big port to London and the Continent.

Suggested Reduction in Dock Charges at Dundee.

Dundee Chamber of Commerce have written to the Finance Committee of the local Harbour Trust suggesting that (as soon as arrangements permit) the Trustees should reduce the dock charges which still remain at too high a level as compared with the 1913 charges; particularly when it is considered that the wholesale prices of all commodities have approached (and in many cases fallen below) pre-war figures. The Finance Committee agreed to recommend that the Chamber of Commerce be informed that the whole of the harbour rates are at present under revision in view of the Provisional Order to be promoted by the Trustees. The valuation of the harbour has been taxed at the net figure of £23,360 as compared with £25,151 in the previous year; a decrease of £1,791. The rateable value (after deducting the amounts allowed under the Rating Act) is £6,140 as against £6,588.

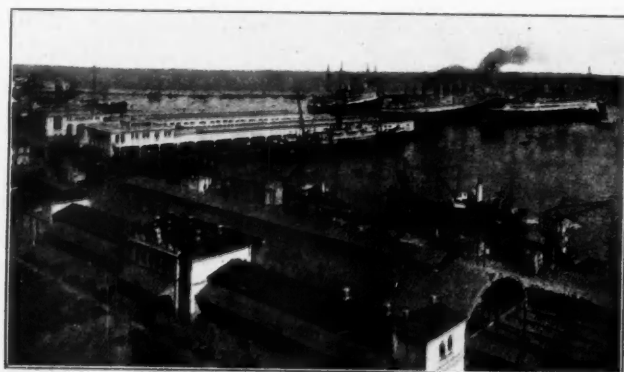
The Port of Algiers



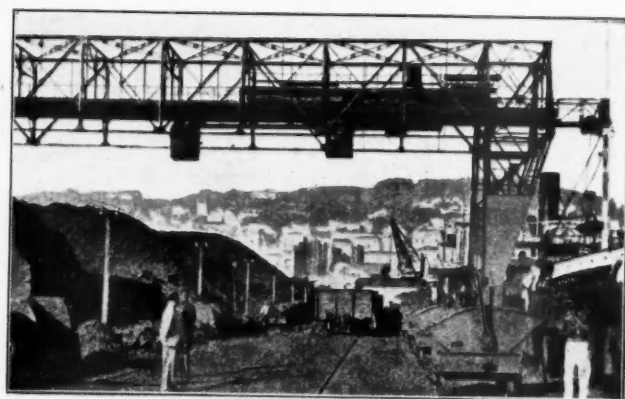
The Port of Algiers in 1830.



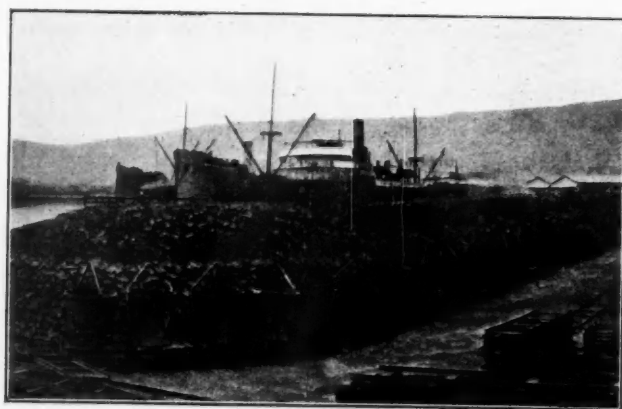
The Port of Algiers in 1930.



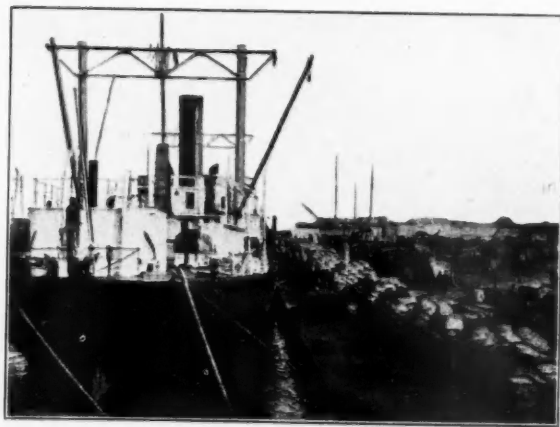
The Maritime Station.



Loading Ore by means of Grab.



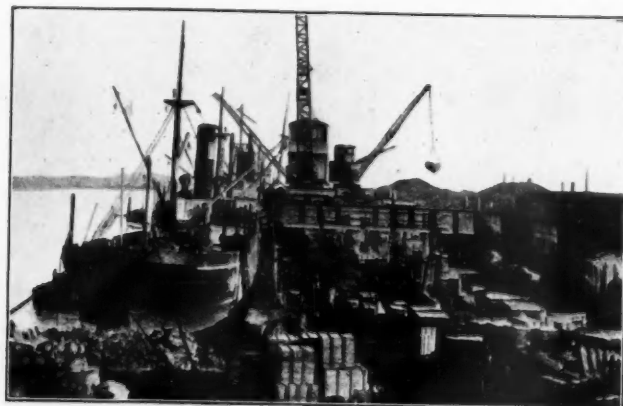
Jetty for Storing Ore.



Cereals being transhipped from Truck to Ship.



Aerial View of Algiers.



The Grand Jetty.

The Port of Algiers

Work Undertaken in Past Years.

AFTER the taking of Algiers, and until 1839, the only work undertaken was the strengthening and improving of the Jetty Kair-ed-dine, where concrete blocks were used. Up till 1848 numerous plans were considered; in the meantime the North Jetty was commenced, concrete blocks of 10 centimetres being used, but it was soon found necessary to substitute blocks of 15 centimetres.

The layout (plan) was drawn up for this jetty, altered by the dominant influences of the times, and was more and more inflected towards the East. It resulted in the paradoxical bending of the jetty, which some called "The Insecure Curve."

In 1848 when the plan of the port was approved, the jetty then measured 500 metres in length, 600 metres of quays having been constructed as well as access from the quays to the town. It was only in 1870 that the port was completely closed and provided with graving docks.



Casks of Wine being loaded on board ship.

In 1885 the wharves and quays for the dry docks were prepared.

Forty-five million francs had been spent on these improvements, an enormous sum for that time.

The other works executed more recently are:—

From 1892 to 1901 the narrowing of the entrance channel.

The widening of a channel to 70 metres in the South jetty.

The enlargement of the North jetty.

All these works aimed to diminish the surf.

The construction of covered sheds, 1896-1906.

The building of the inner harbour of Agha, 1898-1904.

Then the construction of the mole Al-Djefna, and in 1913 the work of extending towards the South-East.

The Question of Extension in 1913.

In 1913 the year when the question of extension towards the South-East was considered, the annual traffic, which was considered normal, was as follows:—

Number of vessels, incoming and outgoing (not including warships), 13,000.

Total tonnage of goods, 3,600,000 tons of which coal comprised 50 per cent., wine 16 per cent., minerals 11 per cent. and sundries (various) 23 per cent.

As this traffic was not increasing the engineer-in-charge together with the Chamber of Commerce planned an extension of quays which would allow of 18,000 vessels to enter and leave the port in a year, representing 70 vessels per day.

This extension allowed for two basins being built, that of Mustapha, being near the Jardin d'Essai, and that of the Hamma, following on to the Hussein-Dey. An outer port was provided facing the two basins with an entrance resembling that of the old actual port.

In a general manner, the effect of the two basins presented a certain likeness to the modern ports of Buenos Aires, and Bordeaux, notably from the point of view of the obliqueness of the moles.

Equipment of the Port.

The equipment of the Port of Algiers is not yet very important.

The Chamber of Commerce gradually equipped jetties with cranes, etc., and there are now 14 electric cranes, 12 of which are installed on the large jetty of Agha and two on the quay south of the Jetty Al-Djefna.

Commercial and Naval Movement.

Concerning vessel tonnage, the Port of Algiers in 1919 occupied fourth place amongst the principal ports of France, with a tonnage of 16,397,063 tons, coming after Marseilles (29,091,595 tons), Oran (20,966,228 tons), and Le Havre (18,666,125 tons) and fifth place for number of vessels with 8,799, Le Havre being first with 16,533 vessels, Marseilles second with 15,437 vessels, Oran third with 11,581 vessels and Rouen fourth with 8,803 vessels.

As regards goods traffic, it is classed as sixth amongst the French ports, with 3,941,594 tons, coming after Rouen (8,618,292 tons), Marseilles (5,774,046 tons), Dunkerque (4,528,042 tons), Le Havre (4,392,842 tons) and Bordeaux (4,142,067 tons).

The imports comprise oil, wood, petrol, constructional materials, furniture, machines, metal work and implements, paper, textiles, chemical products, Colonial wares, sugar, coffee, oil of sesame, cereals when deficient in Algeria, beverages, etc.

France's portion in these importations is about 75 per cent.

Then come Great Britain, United States, Brazil, Morocco, Argentine Republic, Belgium, Italy, etc.

Of the exports wines are the principal product, cereals, when a good harvest, oranges, lemons, tangerines, tobacco, potatoes, haricot beans, artichokes, tomatoes, olive oil. Sheep also is an important export (172,077 head in 1929).

Algiers as a Port of Call.

Situated in a central position on the great Mediterranean route, equi-distant from the North of Europe and the Suez Canal—from Algiers to Port Said is 1,510 miles, and to Havre it is the same distance—the Port of Algiers, owing to its exceptional geographical situation has, for a long time, been chosen as a port for revictualling.

Coal depots of which the total capacity is roughly 100,000 tons are established on the quays and barges are ready at any hour to come alongside vessels and bunker them.

A Tourist Port.

It is remarkable each year the number of French and foreign companies who choose Algiers as a port of call for tourists.

It is interesting to note that 110 touring vessels called at Algiers during their tour of 1929-1930.

The evolutions of these vessels are facilitated by the presence of several powerful tugs (two of 750 h.p., two of 600 and one of 400, etc.).

Aerial Services.

The Port of Algiers possesses an aviation base with service lines from France to Algiers.

Since the 1st October, 1929, six departures have taken place per week in each direction.

The Harbour of St. John, New Brunswick

His Majesty's Senior Trade Commissioner in Canada has received the following announcement from the Harbour Commissioners of the Port of St. John, New Brunswick:—

"The Saint John Harbour Commissioners have pleasure in announcing that the major portion of their facilities at West Saint John—destroyed by fire on 22nd June—will be rebuilt, fully equipped and otherwise ready to handle expeditiously—import and export traffic by 1st December, 1931.

"The new facilities will be thoroughly modern, including steel sheds and the latest type of grain conveyors.

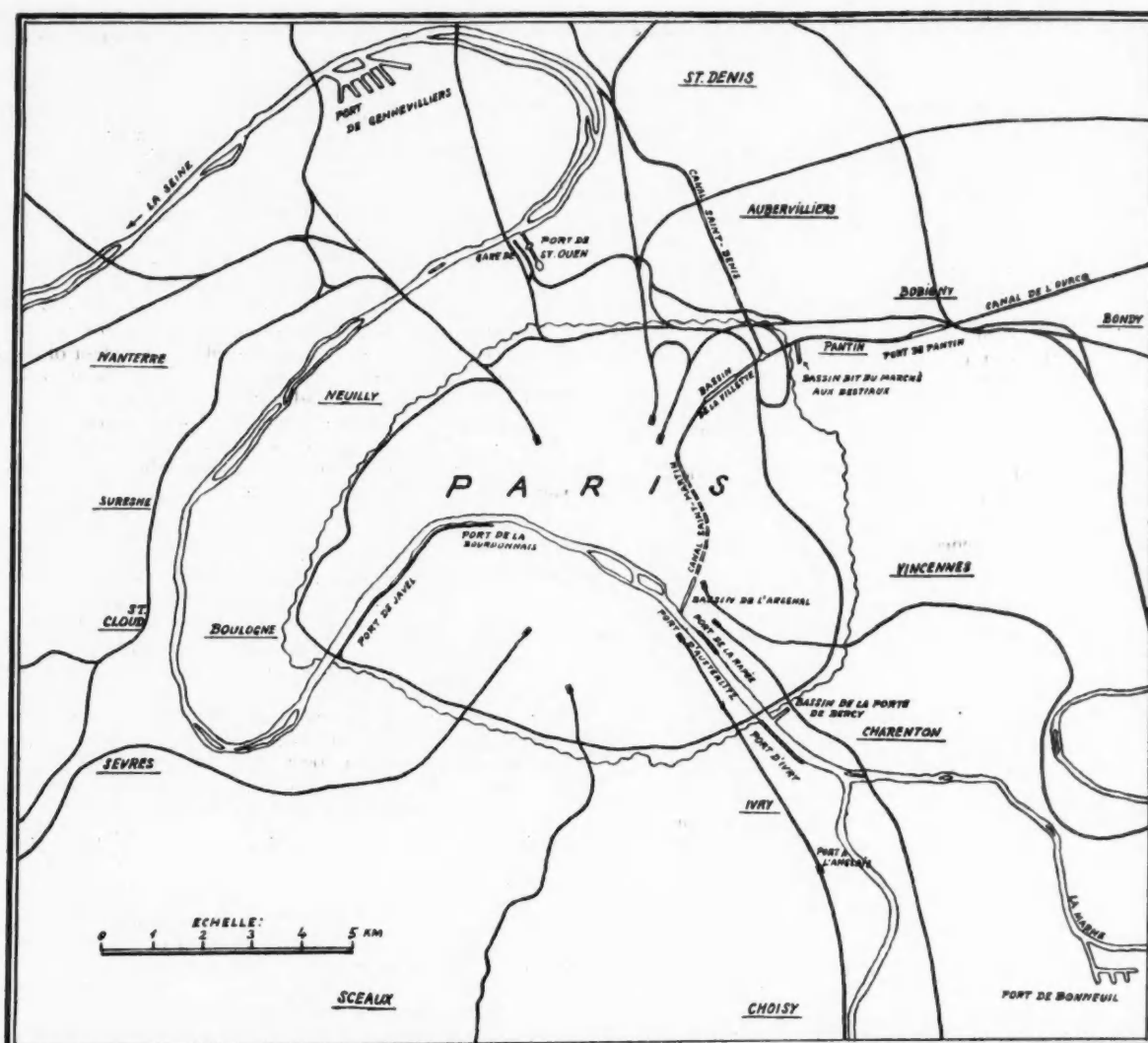
"This remarkable achievement is rendered possible by the very prompt and generous action of the Dominion Government in furnishing skilled engineering advice and adequate funds for the work.

"We also gratefully acknowledge the hearty co-operation of the Provincial Government, the Canadian Pacific Railway, the Shipping Interests, the City Council and the Board of Trade of Saint John, as well as the sympathy and goodwill extended by the press throughout Canada.

"The results of this combined effort is that importers and exporters need have no hesitation in continuing to route traffic through the Port of Saint John."

The River and Sea Port of Paris

By C. BIELENIA, Civil Engineer



I.—General Remarks

THE definition of the Port of Paris must be understood as comprising loading quays and basins (docks) situated along the shores of the rivers Seine and Marne and of the canals de l'Ourcq, Saint-Denis and Saint-Martin.

The Port of Paris is indeed a River and Sea Port, because there is a regular service of small cargo-ships from England to Paris. The Port of Paris has a continual connection by waterways with all parts of France and also with Belgium and Germany, and obtains by waterway the following principal goods: fuel, building materials, wood, products of the metal industry, victuals and wine.

The population and the industry of Paris obtain from the waterways a good deal of their total consumption. The boundaries of the Port of Paris are the same as the boundaries of the Département de la Seine.

The Port of Paris has a yearly traffic of goods of about 20,000,000 tons—19,600,000 English tons (1930). It is noteworthy to draw attention to the fact, that the total yearly goods traffic of the two largest French sea ports—Rouen and Marseilles—is also 19,600,000 English tons, too. That comparison gives a clear evidence of the great importance of the Port of Paris.

Great-Paris practically consists of three parts:—

- (1) The proper City of Paris (Ville de Paris proprement dite).
- (2) The adjacent communications of the Département de la Seine (communes du Département de la Seine).
- (3) The adjacent communications of the Département de la Seine et Oise and of the Département de la Seine et Marne (communes limitrophes).

According to points 1 and 2 the number of inhabitants is estimated at about 5,570,000 and the total (according to points 1, 2 and 3) is estimated at about 6,000,000.

It should be mentioned that a considerable proportion of the goods imported to Paris are consumed in numerous industrial establishments; those establishments frequently forward their products beyond the boundaries of Paris.

The quays of the Port of Paris belong to the State and also to private persons or firms. The State lets its quays by lease to different tenants (trade or industrial firms), usually for long periods.

Some of the quays are used exclusively by private firms and hence they are equipped with specialised transporting devices. On the contrary public loading quays have as a rule less specialised equipment, suitable to all kinds of goods; there are electric cranes, mostly of a capacity of 1.5 to 5 tons (29½ to 98 cwt.), but there are also several cranes of a capacity of 15 tons (294 cwt.) and 50 tons (980 cwt.). Some of the quays have no fixed cranes, but in case of need they are served with cranes installed on automobiles. Several floating cranes are also at disposal.

The Port of Paris has a lot of storage places and buildings and some of the storage buildings are many-storeyed with numerous transporting devices. The detailed list concerning equipment of the Port of Paris will be issued in the "Guide officiel de la navigation intérieure" at the end of 1931.

The majority of the quays have railway tracks, which connect the principal railways of the country.

II.—Description of the Different Parts of the Port and the Designed Enlargement

1.—The Canal de l'Ourcq.

The construction of the canal de l'Ourcq was initiated by the Emperor Napoleon I. in 1805 in order to supply water to Paris and to enable barges to navigate to Paris. Nowadays,

The River and Sea Port of Paris—continued

that canal supplies a great volume of water for industrial purposes, moreover there is a considerable cargo traffic. The normal water depth is 1.4 metres (4-ft. 7-in.), which is sufficient for the navigation of boats called "flûtes d'Ourcq," size 28.5 metres (93-ft. 6-in.) in length; 3 metres (9-ft. 11-in.) in width; maximum draught 1 metre (3-ft. 4-in.); the maximum carrying capacity of such a boat is 60 tons (59 English tons).

It is worthy to note that despite the small dimensions of the canal and boats, a yearly goods traffic of 927,000 tons (910,000 English tons) was registered in 1926.

Seventy per cent. of this traffic comprised building materials, and the remainder (30 per cent.) consisted of industrial products for the north-east suburbs, victuals (principally corn and sugar) and wood.

Due to the very intensive development of the north-east suburbs of Paris and to the settling of numerous new industrial establishments, the authorities recognised the necessity for enlarging the canal de l'Ourcq within the boundaries of the Département de la Seine. Work was begun in 1925 on deepening and widening a section 3.3 km. (2.05 English miles) in length and was finished in 1930, the depth then being 3.2 metres (10-ft. 6-in.). This part of the canal was then available for navigation of boats with a carrying capacity of 600-800 tons (590-780 English tons). At the same time the construction of a new port at Pantin (suburb of Paris) was initiated, to co-operate with the basin de la Villette (see below). Now work on the enlargement of a further section of the canal de l'Ourcq from Bobigny to the boundaries of the Département de la Seine has been commenced. On that section the construction of two new ports is planned for the future: de Bondy and de Bondy-la-Forêt; the respective works are expected to be finished by the end of 1932.

In the new port at Pantin the construction of modern loading and store installations is proceeding. They will be situated along the quay 800 metres (870 yards) long. Two many-storeyed store-houses for sundries and a special building for loading and storing of alcohol are already erected. All three buildings are constructed of reinforced concrete frames, founded upon piles on the Hennebique system (reinforced concrete). These buildings were erected by the well-known firm "Entreprise Chouard," which is well-equipped with machinery for the transportation of materials and for the execution of the works. For example, that firm has a pile-driving plant 30 metres (98-ft. 6-in.) in height; this extraordinary height is very useful for the construction of sea-port quays, founded upon long piles.

On the aforesaid works, and as is usual in France, the quick-setting cement is applied, so that building can proceed at the highest speed.

As soon as the work of enlarging the canal de l'Ourcq and the construction of the port Pantin are achieved, the designed construction of a new port basin called du Marché aux bestiaux will be undertaken; that basin will be 593 metres (650 yards) in length and 65 metres (71 yards) in width.

2.—The Canal Saint Denis.

The course of the canal Saint-Denis begins from the basin de la Villette and runs into the Seine at Saint-Denis; the basin de la Villette is situated almost in the centre of the proper City of Paris. The canal Saint-Denis is 6.647 km. (4.13 English miles) long; that is the shortest way for goods to be forwarded to the City itself. The depth of water is 3.2 metres (10-ft. 6-in.), and is sufficient for navigation by boats of a carrying capacity up to 1,200 tons (1,180 English tons), coming from the Seine. The largest traffic on the canal was 3,050,000 tons (3,000,000 English tons) in the year 1930. Eighty per cent. of that amount consisted of imported goods, the principal commodities being:—

		Tons	English Tons
Coal and other Fuel	...	930,000	910,000
Building Materials	...	640,000	630,000
Industrial Products	...	876,000	860,000

3.—The Canal Saint Martin.

The course of this canal runs from the basin de la Villette and enters the Seine below the Austerlitz bridge. The length of the canal is 4.553 km. (2.82 English miles), of which nearly 2.080 km. (1.29 English miles) runs under tunnels. The depth of water is 2.2 metres (7-ft. 2-in.), enabling navigation by boats of a maximum draught of 1.9 metres (6-ft. 2-in.). The course of the canal, save the underground part, serves as loading quays, i.e., along both shores transshipment operations are performed. Maximum yearly traffic was 1,070,000 tons (1,050,000 English tons) in 1930; over 50 per cent. was building materials.

4.—The Basin de la Villette.

The basin de la Villette deserves to be especially mentioned, because the three canals, de l'Ourcq, Saint-Denis and Saint-Martin, run into this basin, i.e., this basin represents an

important junction with connections in three different directions. The dimensions of the basin are: width 70 metres (77 yards) on a length of 700 metres (770 yards), and a width of 30 metres (33 yards) on a length of 600 metres (660 yards). Along the quays there are situated 9 large store-houses 12 metres (13 yards) in width and 885 metres (970 yards) total length. The yearly maximum traffic of this basin was 1,210,000 tons (1,180,000 English tons) in 1925. The principal commodities are:—

		Tons	English Tons
Building Materials	...	370,000	365,000
Fuel	...	250,000	245,000
Industrial Products	...	140,000	138,000
Agricultural Products	...	320,000	315,000

The cost of exploiting these three canals (de l'Ourcq, Saint-Denis, Saint-Martin), without the cost of new works, was 7,020,000 francs (£56,500) in 1930. The income consists: firstly, of port and navigation taxes; secondly, of the sale of water from the canal de l'Ourcq to industrial establishments. The port and navigation taxes in 1930 amounted to 5,000,000 francs (£40,000); water was supplied to the extent of 31,000,000 cu. metres (990,000,000 cu. ft.). Evidently the exploitation of these canals is a very advantageous undertaking, especially from the financial point of view. That is rather a rare fact, because ports and canals only give considerable profits indirectly and small profits directly; in this respect ports and canals are very similar to roads.

5.—The Marne.

On the lower course of the Marne there is a water depth of 2.2 metres (7-ft. 2-in.) and enables navigation by boats of a carrying capacity of 300 tons (295 English tons). The Marne is of great importance to the Port of Paris as a connection to the east of France. The traffic on the Marne is now much larger than in pre-war time. Within the boundaries of the Département de la Seine there exists on the Marne one large public port—de Bonneuil—which also has good railway connection. The port de Bonneuil rendered great service during the war, but now the traffic has decreased in this port. In order to revive the port, traffic authorities decided to perform various improvements to the transshipment devices and to induce a settlement of new industrial establishments in the area of the port.

6.—The Seine.

The depth of the Seine within the boundaries of Paris is 3.2 metres (10-ft. 6-in.), and below Paris it is also 10-ft. 6-in. to Rouen, but from Rouen to Le Havre the depth is 7.5 metres (24-ft. 6-in.) (Seine maritime). We find on the Seine the following types of vessels:—

- (1) Self-propelling boats, usually with an internal combustion engine (automoteurs), of a carrying capacity of 130-540 tons (128-530 English tons).
- (2) Boats without engines (péniches), of a carrying capacity of 400 tons (395 English tons).
- (3) Boats without engines (chalands), of a carrying capacity of 1,500 tons (1,480 English tons).
- (4) Passenger ships for suburban traffic.
- (5) Small cargo steamers for overseas transport.
- (6) Tugs towing boats without engines.

The most important transshipment places on the Seine are as follows:—Port d'Ivry, Port des magasins généraux de Bercy, Port de la Rapée, Port d'Austerlitz, Port d'Arsonal, Port de la Bourdonnais, Port de Javel, Port de Saint Ouen, and Port de Gennevilliers. Moreover, there are several landing places for passenger steamers.

Statistics show a maximum yearly traffic on the Seine below Paris of 8,200,000 tons (8,050,000 English tons) in 1927, of which 85 per cent. are goods forwarded from the mouth of the Seine to Paris. The following principal commodities are noted:—

		Tons	English Tons
Coal	...	4,000,000	3,920,000
Oil	...	600,000	590,000
Building Materials	...	1,300,000	1,280,000
Victuals	...	800,000	790,000

The Seine below Paris was regulated by a law passed in 1878, but constructions performed at that time were before the war naturally out-of-date. Therefore, after the war the authorities commenced to renovate these old constructions according to modern requirements. The programme of planned works is very large, however, therefore they will be constructed gradually. The above-mentioned programme includes: the deepening of the Seine, the correction of curves which are too sharp, the renovation of old weirs and the construction of new ones, the removal of old engines on chamber locks and installing electric motors, etc., in their place.

The River and Sea Port of Paris—continued

As soon as the above named works are completed, the speed of traffic will probably rise; thus the time of transporting from Rouen up to Paris is expected to become one day shorter. At the same time navigation by means of sea lighters of a carrying capacity of 2,000-2,500 tons (1,900-2,460 English tons) will be possible, and English coal will be able to be shipped direct to Paris (Gennevilliers) without transshipment into smaller barges at Rouen, as is the rule nowadays.

The designed works on the canals de l'Ourcq, Saint-Denis and Saint-Martin have already been described. Now I should like to mention the works in execution and projects, concerning loading plants on the Seine.

1. At the place where the Seine crosses the limits of the City of Paris it is intended to construct a new port basin de la Porte de Bercy, 330 metres (360 yards) in length and 45 metres (49 yards) in width, with a connection to the P.L.M. railway. Along the quays large store buildings will be erected. The commencement of these works is postponed for the time, when the required grounds (actually owned by the military board) will pass to the possession of the municipality.

2. The port de Gennevilliers, situated north-west of Paris, will be in future a port terminus for great overseas transports, principally English coal. Spacious store yards and buildings will be erected there, with good connections to railways. The authorities of the Département de la Seine lastly acquired 390 hectares (960 acres) of land, on which several port basins will be situated; the depth of water in them will be 4.75 metres (15-ft. 7-in.), the width of each basin 70-90 metres (77-99 yards) and the length of each basin 800 metres (880 yards). Between every two basins there is provided land 100 to 300 metres (218 to 328 yards) in width, where store and industrial plants will be erected on long-period tenancies. The total area of store and industrial grounds will be raised to 180 hectares (445 acres). The port will have a sufficient number of roads and railway tracks; the main port railway station will be situated in the back part of the port parallel to the Seine.

The total area of water surface will be raised to 47 hectares (116 acres), the same as that of the port of Dunkerque. The total length of quays will be increased to about 12 km. (7.5 English miles). The enlarged port de Gennevilliers is expected to be capable of handling 3 to 4 million tons of traffic yearly. The contractors, Messrs. Morillon Corvol and Co., will dredge two new basins in the western part of the port de Gennevilliers, and according to agreement will take in exchange the dredged gravel as sole remuneration for the execution of the work. As the neighbourhood of Paris is an immense consumer of building materials, the contractors are making a rather good business; the authorities probably are comforted, too, because they need not pay cash. The financial scheme of the works may be interesting for all governments or boards handicapped by lack of cash; the only trouble is that such advantageous circumstances as obtain in the port de Gennevilliers are not to be found everywhere.

The first group of new basins is supposed to be delivered for public use within the next few years. The rest of the acquired land, which is not yet being worked, is let to tenants for short periods.

According to the opinion of certain engineers, the costs of the total construction of the port Gennevilliers are so high that the whole programme ought to be divided into several and rather long periods of time. They say that the supplementary transshipment of English coal in Rouen does not considerably raise the summary cost of transport, if there is fast work by modern loading devices.

The above view ought to be studied and detailed financial calculation gone into. Nevertheless it is clear to every business man that the present transshipment of coal in Rouen induces a certain loss of time, reduces the value of coal (crumbling into smaller pieces) and causes other negative results, which are not quite easy to be calculated exactly. No doubt the creation of a modern port terminus for English coal within the boundaries of Great Paris must be considered as a most important task from all points of view; of course on the presumption that the Seine will be deepened and improved at the right time.

The Port of Paris authorities are further occupied with two other problems:

- (1) The required sinking of high water flood within the boundaries of Paris;
- (2) The water supply to the Seine during periods of low water (summer); that is a very pressing matter, because numerous industrial establishments are taking water from the Seine for their own purposes and thus they obstruct navigation.

The solving of these two problems is only possible by the construction of a group of water storage reservoirs; then also a certain hydro electric power will be available. The following localities are most suitable for the purpose of storage reservoirs:

- (1) Morvan—granite ground impenetrable to water, numerous valleys with steep slopes.
- (2) Champagne—clay ground at the bottom of chalk slopes—typical of the country to the east of Paris.

The project of the authorities provides for a construction of reservoirs as below:—

- (1) Réservoir de Pannetière on the Yonne river; volume of water, 92,000,000 cu. metres (3,250,000,000 cu. ft.), concrete dam 47 metres (154 ft.) in height, hydro-electric plant of 18,000,000 kilowatt-hours yearly.
- (2) Réservoir Champaubert—aux Bois in the locality Der, between Moitierender and Saint-Dizier, on the rivers la Droye and la Blaise; volume of water 23,000,000 cu. metres (815,000,000 cu. ft.); three earth dams of maximum height 10.5 metres (34-ft. 6-in.).
- (3) Réservoir du Croissant on the river la Cure and réservoir du Bois de Chaumeçon on the river la Chaux; volume of water 23,000,000 cu. metres (815,000,000 cu. ft.).

The scheme provides summarily a volume of stored water of 138,000,000 cu. metres (4,880,000,000 cu. ft.) and it is expected that the volume of water in the Seine will rise 50 per cent. during the low water periods. Further a sinking of the maximum high water (1910) of 20 cm. (8-in.) is expected.

The total cost of the above-mentioned undertaking is estimated approximately at 80 million francs (£640,000). The described scheme of the construction of reservoirs was ratified by the Ministry of Public Works on January 14th, 1926. Actually the authorities are designing detailed plans and studying the financial part of the undertaking.

The first group of reservoirs is supposed to be sufficient for the next few years, but in the more distant future it will be necessary to build a second group of reservoirs, namely:—

- (1) Réservoir Chantecoq in locality Der; volume of water 64,000,000 cu. metres (2,260,000,000 cu. ft.).
- (2) Réservoir Grand Orient on the east of the locality Barsur-Seine; volume of water 100,000,000 cu. metres (3,530,000,000 cu. ft.).
- (3) Two reservoirs Serein; volume of water together, 114,000,000 cu. metres (4,030,000,000 cu. ft.).

The primary plans are ready and the time of completion depends upon the speed of the future development of Great Paris.

Canada's New Grain Shipping Route

The first commercial grain shipment from the new port of Churchill, Manitoba, on Hudson Bay, is expected to leave towards the middle of September, and on September 2nd 24 car loads of No. 1 Northern wheat arrived at the elevator. Four hundred car loads averaging 1,515 bushels each have been despatched to the port, so that approximately 600,000 bushels have been made available at the elevator as cargo for the two tramp steamers chartered for the trip.

Concurrently with the arrival of the grain at the new 2,500,000 bushel elevator at Churchill, two 5,000-ton steamers of the Dalglish Line, the "Warkworth" and the "Farnworth," were despatch to the port. The "Farnworth," which sailed from Newcastle-on-Tyne on August 28th via the North of Scotland, is timed to arrive on September 15th, when loading is to take place immediately. The "Warkworth" is now en route from Montreal, being billed to commence loading on September 20th. The whole consignment should have cleared from Churchill on September 25th, and it is understood that the charterers had the option of sending the grain to any two safe ports in the United Kingdom or to one Continental safe port in the Bordeaux-Hamburg range.

Churchill, while as yet practically without permanent housing accommodation, is well prepared to handle the shipment, the volume of which is estimated at less than one-eighth of the tonnage which, if necessary, could be handled through the Hudson Bay shipping route during the coming autumn. The elevator has been completely finished two weeks ahead of the scheduled date, and at the docks the last section of this year's cribwork has been finished, completing 1,800 feet of deep water wharfage. The trackage facilities at the elevator make it possible to unload four trains at one time, the cars running over four rocker dumps, each having an unloading capacity of 20 cars an hour.

The grain, comprising the first commercial shipment to Europe via the Hudson Bay route, is Saskatchewan wheat originating along the lines of the Canadian National Railways, and the Canadian Wheat Pool is the shipper. The three best grades of Canadian wheat make up the shipment, but the specific quantities of each—that is, No. 1 Hard, No. 1 Northern, and No. 2 Northern—have not been divulged.

Italian Harbour Affairs

ACCORDING to statistics which have been published by the Ministry for Communications, shipping at Italian ports during the month of August, 1931, included the arrival of 19,953 ships representing 6,786,846 n.r.t., 2,097,140 tons of goods and 547,006 passengers; and the clearance of 19,842 ships, 6,895,420 n.r.t. with 665,790 tons of goods and 526,503 passengers. In August, 1930, shipping included the arrival of 20,331 ships representing 6,571,441 n.r.t. with 2,108,743 tons of goods and 519,511 passengers, and the clearance of 20,093 ships, 6,613,297 n.r.t. with 696,219 tons of goods and 516,357 passengers. There has thus been a decrease, both in the number of ships arrived and cleared, and the volume of goods imported and exported, while there has been an increase in the net register tonnage both of ships arrived and cleared, and in the number of passengers arrived and departed. The totals arrived and cleared for August, 1931, and 1930 are as follows:—

		Ships No.	N.R.T.	Goods Carried	Passengers
August 1931	...	39,795	13,682,266	2,762,930	1,073,509
August 1930	...	40,424	13,181,738	2,804,962	1,035,868

Although the monthly statistics cannot prove—particularly during the summer season—the basis for a definite idea in connection with the condition of traffic at Italian ports, yet it can be said that the above figures can be considered as fairly satisfactory taking into consideration that while on August 31st, 1930, shipping had shown a decrease of about 240,000 tons of goods imported and exported in respect to the corresponding period of 1929, at the end of August, 1931, it has shown a total decrease of only about 50,000 tons in respect to August, 1930. From the above it can easily be recognised that the downward trend of Italian shipping is decreasing. Of goods imported and exported about 1,700,000 tons have been handled by Italian ships, and a little over 1,000,000 tons by foreign ships.

According to statistics which have been published by the Consorzio Autonomo del Porto di Genova shipping during the month of August was as follows:—

		ARRIVALS			CLEARANCES	
	No.	N.R.T.	Goods Tons	No.	N.R.T.	Goods Tons
August 1931 ...	423	875,604	441,007	437	887,482	61,469
August 1930 ...	433	798,908	427,546	445	831,148	55,013
Difference ...	-10	+76,696	+13,461	-8	+56,334	+6,456

It will be seen that there has been a slight increase in the volume of goods imported and exported. At Venice, however, shipping as a whole has shown a decrease of 12 per cent. in respect to the corresponding period of 1930, as will be seen from the following statistics which have been published by the Provveditorato del Porto di Venezia:—

		Imports Tons	Exports Tons	Total Tons
August 1931	...	206,501	32,980	239,481
August 1930	...	222,836	50,403	273,239
		-16,335	-17,423	-33,758

The decrease in imports is due chiefly to the smaller arrivals of oil, building materials and general cargo, while the decrease in good shipped is entirely due to the smaller exports of pyrite ashes. Venice shipping during the first eight months of 1931 has shown a decrease of 116,163 tons in respect to the corresponding period of 1930.

The Italian Government continues to watch with interest the development of shipping at Italian ports, and it is understood that the Ministry for Public Works has just taken up the question of enlarging the port of Ancona. According to the project which has been worked out by the Royal Engineers Corps the Northern breakwater should be lengthened by about 370 metres and the Southern breakwater by about 300 metres so that an outer basin be created with a view to ensuring a calmer surface of water in the inner harbour. Also the quayage of the inner port is to be enlarged, and these works will be completed within the next five years.

Important works have also been started at Civitavecchia where the old Lazzaretto has been evacuated by the Royal Engineers Corps as to the west of this building a new pier is to be built with a length of about 500 metres. Furthermore a new railway terminal has to be built in the outer harbour, a new quay has to be built in connection with the new Lazzaretto pier and the depth of water in the whole port is to be increased to about 10 or 12 metres.

The main event of the month is no doubt the "International Navigation Meeting" which was opened in Venice by the King of Italy. About 700 delegates have participated at the meeting, and among them there were about 300 representing the Governments of their respective countries.

In connection with the development of Italian harbour facilities it may be interesting to note that according to information supplied by ing. Filippo Bastianelli, Technical Adviser for the Società per i lavori del Porto di Genova, the Bacino Mussoni Dock has to be completed by December 31st, 1932, and these works include the construction of 1,850 metres of breakwater in continuation of the breakwater sheltering the Vittorio Emanuele II. Dock, and a small wall on the left of the Polcevera mouth to be completed by October, 1931, the construction of two piers and of the connecting quay to be completed by April, 1932, and dredging to a depth of 12 metres in the whole western part of the Port of Genoa. To construct these works the following materials are required: 800,000 tons of rock, 2,000,000 cubic metres of filling-up material and 500,000 cubic metres of mixture of cement and stones. The blocks employed in the construction of the breakwater have a maximum weight of 360 tons and those for the construction of the piers and quays have a weight of 210 tons. The Società per i lavori del Porto di Genova has replaced the pontoon "Italo" which had a lifting capacity of 210 tons and which could carry three blocks up to this weight, with the pontoon "Imperator" which has a lifting capacity of 500 tons, and can carry three blocks up to this weight. The "Imperator" is not fitted with any propelling machinery and, therefore, must be towed, while the operation is done by electricity. The breakwater Principe Umberto has been practically completed, including the superstructure, while the building of the two piers is well advanced. There is no doubt that in this way, during 1932, the Consorzio Autonomo del Porto, will be able to still reduce the use of lighters in the Port of Genoa and facilitate the direct shipments from railway car on the ship or vice versa.

The t.s.s. "Rex," the liner of 50,000 gross tons, belonging to the Navigazione Generale Italiana, has used the large dry dock, which has been built especially for two Italian superliners, and is the second largest in the Mediterranean, as will be seen from the following figures:—

			Length Ft.	Breadth Ft.	Height Ft.	By whom operated
Genoa	...	...	853	105	36	Harbour Board
Marseilles	...	...	585	64	24	
Barcelona			(Floating Dock 6,000 tons)			
Naples	...	...	689	94	33	"
Palermo	...	...	563	80	28	"
Gibraltar	...	...	863	91	38	Military
La Spezia	...	...	702	105	33	"
Venice	...	...	820	117	36	"
Malta	...	...	796	85	34	"

The Consorzio Autonomo del Porto has taken into consideration the possibility of still reducing drydocking charges, and it should be noted that the S. A. Ente Bacini simply hires the dry dock and that the shipowner is free to have the work done by any shipbuilding yard or ship repairer he likes. In general arrangements for drydocking are made from time to time by the steamship agents with the Managing Director of the S. A. Ente Bacini, but should there be any ship requiring immediate drydocking the Harbourmaster may issue an authority to give precedence to that particular ship.

The construction of the "Rex" (50,000 tons) launched in August, 1931, and the "Conte di Savoia" (48,000 tons) to be launched on October 28th, 1931, has raised considerable discussion in Italian shipping quarters in connection with the organisation of steamship services between Italy and New York, and in many Naples quarters it is claimed that some of the largest liners should also be registered at that port. There is no doubt that in order to maintain a regular weekly service with the same type of ships a third vessel of the same tonnage will have to be built, and in such case crossing from the Mediterranean to New York will be reduced to five days, since it would appear that the N.G.I. and the Lloyd Sabaudo are planning to establish an air service from Genoa to Gibraltar in conjunction with the arrival and sailings of such ships, with large especially-built seaplanes.

In connection with this project the construction of the new air port at Genoa is being speeded up.

The problem of the construction of the Porto Industriale di Venezia has already been taken up, and the Italian Government has allowed a further credit of 30,000,000 lire to complete the works which had already been terminated.

The Azienda dei Magazzini Generali at Trieste has already started the construction of new grain silos in the Free Port Duca d'Aosta at Trieste.

Port of Southampton Topics

Statistics for August show Decreases.

THE Dock statistics for August reveal the depression prevalent in the shipping industry, as in nine of the 10 headings under which it is dealt with the traffic shows a falling-off as compared with the corresponding month in 1930.

The passenger returns indicate that a great number of passengers took their vacations later this year than customary. The inward passengers totalled 57,203, as compared with 52,377, giving an increase of 4,826. As against that, however, the outward total was only 58,932 compared with 67,723 during August, 1930.

The slump of 8,791 was only to be expected, however, in view of the depressed conditions which have prevailed in the North Atlantic passenger business during the season.

The number of vessels inward bound during the month under review dropped from 385 to 371, a decline of 14, whilst outward the total slipped back from 389 to 374, a decrease of 15.

The tonnage figures also fell. Inward gross amounted to 1,747,716, as against 1,769,884 a year ago, whilst outward the total was 1,779,806 in comparison with 1,846,522. The decrease inwards was, therefore, 22,168 tons, and outward 66,716 tons.

The net tonnage figures dropped by 997 inward and 39,233 outward, the figures being 917,549 and 918,546, and 924,864 and 964,097.

The cargo returns, which have shown an upward tendency in recent months, also fell during August. Inward the freight handled amounted to 41,053 tons, as compared with 48,023 tons a year ago; whilst exports dropped from 37,834 tons to 29,273—a deficit of 6,970 tons in imports, and 8,561 tons in exports.

Southampton's Popularity as a "Big" Ship Port.

September is usually recognised as the month when the homeward rush of Americans and Canadians who have been holiday-making in Europe reaches its height, and the list of arrivals and departures for the month is the justification.

During the period under review the schedule worked out at more than one departure a day from Southampton to New York, and it is interesting to mention that 14 of the vessels which left with returning Americans were vessels which fall within the "monster" class, namely, craft of over 30,000 tons.

The busiest "big" ship day was September 16th, for within 24 hours the White Star liner "Homer" and the North German Lloyd liner "Bremen" left for New York, whilst the Cunarder "Aquitania" arrived. Three mammoth vessels in a day may be assumed to be sufficient for any port, but in this particular instance the number was increased to four, for the Canadian Pacific luxury liner "Empress of Britain" left for Quebec on the same date.

The list of arrivals and departures are striking testimony to Southampton's popularity as a big ship port, for with 28 vessels of the "mammoth" class arriving or departing within the month, the average was practically one vessel a day.

But for the fact that the North Atlantic Conference decided upon a certain curtailment in sailings, at its meeting in Paris recently, the number of movements of vessels of the big class using Southampton during September would have been 29, but the voyage which the North German Lloyd liner Columbus was to have made from the port on September 24th was struck from the list.

However, the Cunard Line had five arrivals, and four departures by their big ships, the White Star Line four arrivals and four departures, and the North German Lloyd three arrivals and four departures. With the exception of the Canadian Pacific liner "Empress of Britain," which is engaged in trading to Quebec, all the other "mammoth" vessels arriving and departing during the month furnished a link with New York.

When the vessels of lesser tonnage are added to the list of liners arriving at or departing from Southampton, the total is increased to 22 inward and 35 outward. This is a big figure, and it reveals some very interesting data. Of the 22 vessels inward bound from the States, only nine flew the British flag. This leaves 13 foreigners, and 12 of them were German vessels flying either the North German Lloyd or the Hamburg-Amerika house flags.

Outward-bound German liners also form a big percentage of the whole, for whereas 15 were British, including four departures by Red Star vessels, which are known as the Royal Belgian Lloyd Line, Germany were an easy second with 11 vessels departing during the course of the month. The remaining sailings were divided between the United States and Holland, the former country having five and the latter four.

In striking contrast was the schedule of arrivals and departures in respect of Canada. As far as the Dominion is concerned, Southampton had five arrivals and nine departures during September, and in every instance vessels flying the British flag were concerned. In actual fact the programme was shared between the Cunard Line and the Canadian Pacific Company.

Control of Petroleum at Southampton.

The control of the carrying and loading of petroleum within the port of Southampton was the subject of an inquiry by the Ministry of Transport this month. Major Sir Thomas Crozier conducted the inquiry.

It was stated on behalf of the Southampton Harbour Board that the Board, after much thought and consideration, had revised their bye-laws regarding the control of petroleum. They had done so, not with the idea of harassing trade, but with the idea of seeing that there was no danger occasioned to the port or the ships in the port through fires occurring during the loading or carrying of petrol. The new bye-laws are in many instances a relaxation of the old ones, which, made under the Act of 1871, had been more honoured in the breach than the observance.

On behalf of the oil companies it was stated that Southampton was a very safe port, and unusually strict bye-laws would kill trade.

The result of the Ministry's findings is not yet known.

Bombay Port Trust

At a meeting of the Trustees of the Port of Bombay, held on August 25th, 1931, the following were the main items of business disposed of:—

The nomination of Major-General H. Needham, C.B., C.M.G., D.S.O., as a trustee *vice* Col. W. M. Macleod, was recorded.

The following expenditure estimates were sanctioned:—

Rs.40,700 in respect of additional income tax payable to Government under the revised schedule on the loans advanced to the Bombay Port Trust in 1920 and 1921 out of the Bombay Development Loan.

Rs.8,400 for renewing roof of the export shed at Malet Bunder.

Rs.7,000 for renewing certain hydraulic pressure pipes in Victoria Dock.

Rs.6,250 for metalling passages between certain buildings on the Ballard Estate.

Rs.20,000 for extending the Strand Road for the development of the old Cotton Green area.

Vessels, other than ferry steamers, hired transports, Government vessels and country craft, which entered and left the Port of Bombay:—

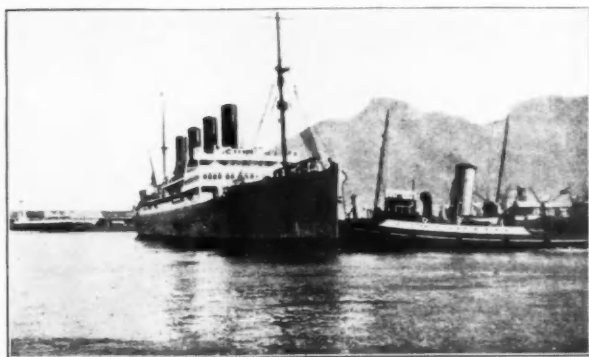
	1930		1931	
	Qtr. ended 30th June	Nett Register Tonnage	Qtr. ended 30th June	Nett Register Tonnage
(a) Entered.	No.		No.	
Vessels engaged in foreign trade	224	846,435	213	812,623
Vessels engaged in coasting trade	479	408,580	511	460,700
Total from 1st April to 30th June	703	1,254,965	724	1,273,323
(b) Cleared.				
Vessels engaged in foreign trade	175	691,652	171	678,583
Vessels engaged in coasting trade	501	555,158	544	612,754
Total from 1st April to 30th June	676	1,246,810	715	1,291,337

Imports and exports at the Port of Bombay:—

	1930			1931		
	Imports Tons	Exports Tons	Total	Imports Tons	Exports Tons	Total
Docks	487,169	591,062	1,078,231	530,088	510,204	1,040,292
" (transshipment)	31,062	33,716	64,778	18,857	26,807	45,664
Bunders	242,878	106,181	349,059	254,197	67,724	321,921
Total from 1st April to 30th June	761,109	730,959	1,492,068	803,142	604,735	1,407,877

South African Harbour Developments

ALTHOUGH the South African coast is poorly provided with natural harbours, artificial docks have been constructed at several important coastal towns, and the capital expenditure on these now totals £15,611,662. Year by year new improvements are carried out, for the Government realises that the prosperity of the country depends largely upon its docks.



One of the Table Bay Harbour Tugs nosing the bows of the "Windsor Castle" away from the Wharf.

At East London the harbour extends for about a mile and a-quarter up the Buffalo River, ending where a combined road and railway bridge connect the western and eastern banks of the river. Many years ago the entrance to the river was barred by a heavy sand bank, but this has been reduced so much that at present the declared depth is 28½ feet L.W.O.S.T.

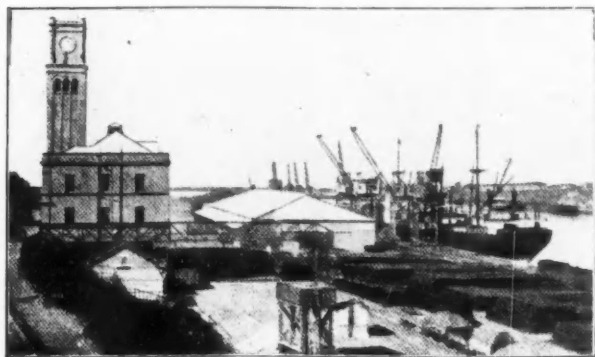
To the south and east strong breakwaters protect the works. From here the wharfs extend along the east and west banks for 5,760 lineal feet, with the depths ranging from 11 feet to 32 feet L.W.O.S.T. The breakwaters have been completed at an expenditure of £632,400, and the jetties, wharves, quays and buildings at a cost of £421,967.

These wharves and quays have sheds with a total floor space of 280,000 sq. ft. There are 3 steam and 20 electric cranes, the capacities of which range from 3 to 5 tons. There is a 20-ton electric crane, a 50-ton steam crane and a 3-ton Temperley transporter. The total cost of this equipment was £75,022. The dock is also provided with storage facilities for oil in bulk and is well provided with tugs, lighters and other floating equipment. The total capital expenditure on the harbour, excluding new works, is £1,481,027.

Among the improvements under way is the deepening of the entrance channel to 35-ft. L.W.O.S.T. and the provision of a turning basin near the entrance. This is to be 1,000-ft. square, with on the east side a new deep-water quay 1,000-ft. long, with an alongside depth of 35-ft. L.W.O.S.T. On the west side a new tanker berth with a depth of 30-ft. L.W.O.S.T. alongside is well on the way to completion. A new road and railway bridge is also to be constructed, the cost of all these new works being estimated at £400,000.

At Durban considerable progress has been made on the 300-ft. extension of the south breakwater, which is being extended in a north-easterly direction. As the concrete blocks are made they are swung into convenient positions by 30-ton Titan cranes. The crane installed in 1928 cost about £18,000, but has a radius of 90-ft., as against the 60-ft. radius of the Titan crane used since the Great War period. This extension is estimated to cost at least £174,000.

The ground coal storage scheme has been completed. This provided additional storage for 60,000 tons of coal in 20 bins of varying size. The loading and off-loading is performed



East London.

with trolley hoists worked from a travelling bridge. Thus in a few minutes a 40-ton truck of coal can be emptied and sent on its way.

In the oil sites at Island View about 80 acres of ground have been reclaimed and tanks with an aggregate storage capacity of 12,000,000 gallons provided. Two tanks of roughly 6,000,000 gallons are also owned by the two petrol companies that import



A Large Steamer heading out from the shadow of Table Mountain. The Huge Grain Elevator is seen on the right of the picture.

fuel supplies in bulk. Oil tankers discharge their oil fuel cargoes through 8-in. steel pipes at the Bluff Wharf. The petrol cargoes are discharged at Island View Wharf through 6-in. steel pipes. Reclamation of this area began in May, 1921. The wharf is constructed of timber and is being extended to 1,500-ft., so that three tankers will be able to lie alongside. The depth is 30-ft. L.W.O.S.T. At least 868 lineal feet of service track has been laid.

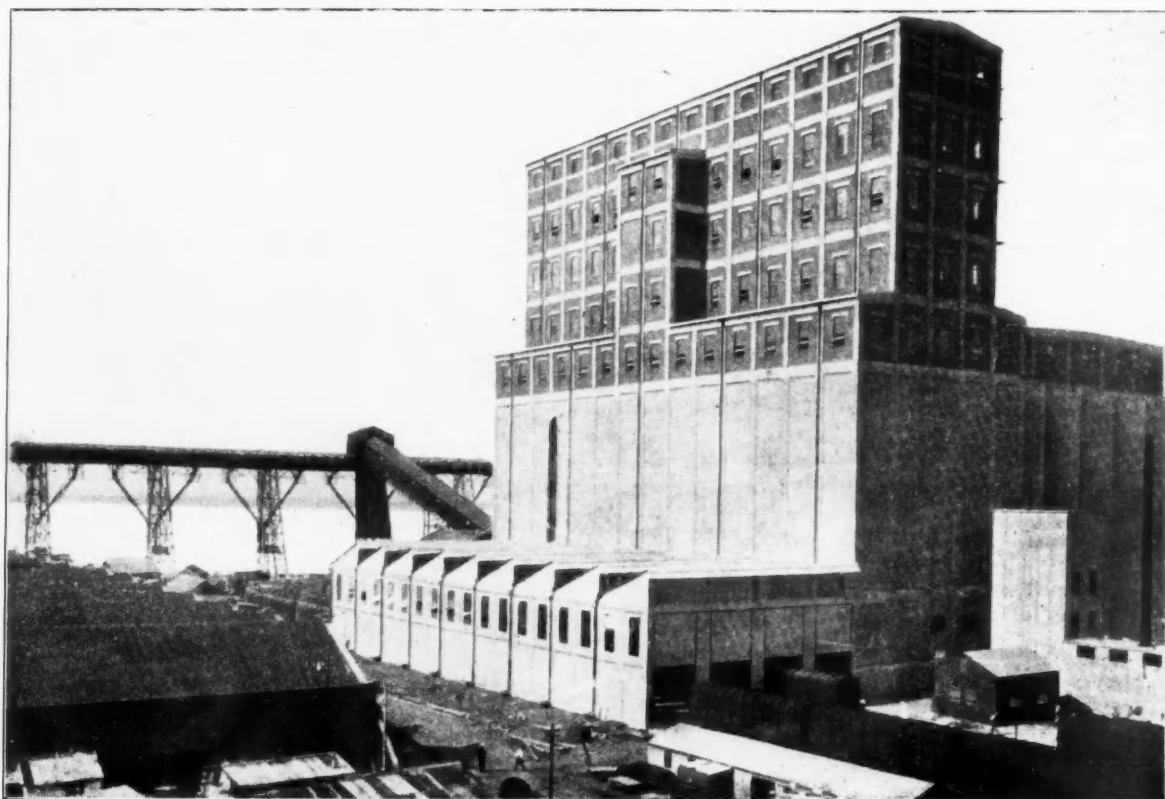
At Congella a large piece of ground has been reclaimed, but before the railway administration leases this it intends to extend the wharfage on the water front. The total extension of Maydon Wharf is to be 2,300-ft., giving it a total length of 5,760 lineal feet. The piling and superstructure of the new section is to consist of jarrah piles and decking instead of concrete reinforced piles and composite decking. When all the extensions are completed the Congella wharfage will have only 260-ft. short of one and a half miles of deep draught accommodation.

At the foot of Albert Park an area of about 3 acres has been reclaimed. This is to be used for the erection of fish curing and storage buildings. At the recently completed 600-ft. jetty 6 fishing craft, double banked, can be berthed comfortably. The depth at this jetty is 15-ft. L.W.O.S.T. The jetty has a width of 32-ft.

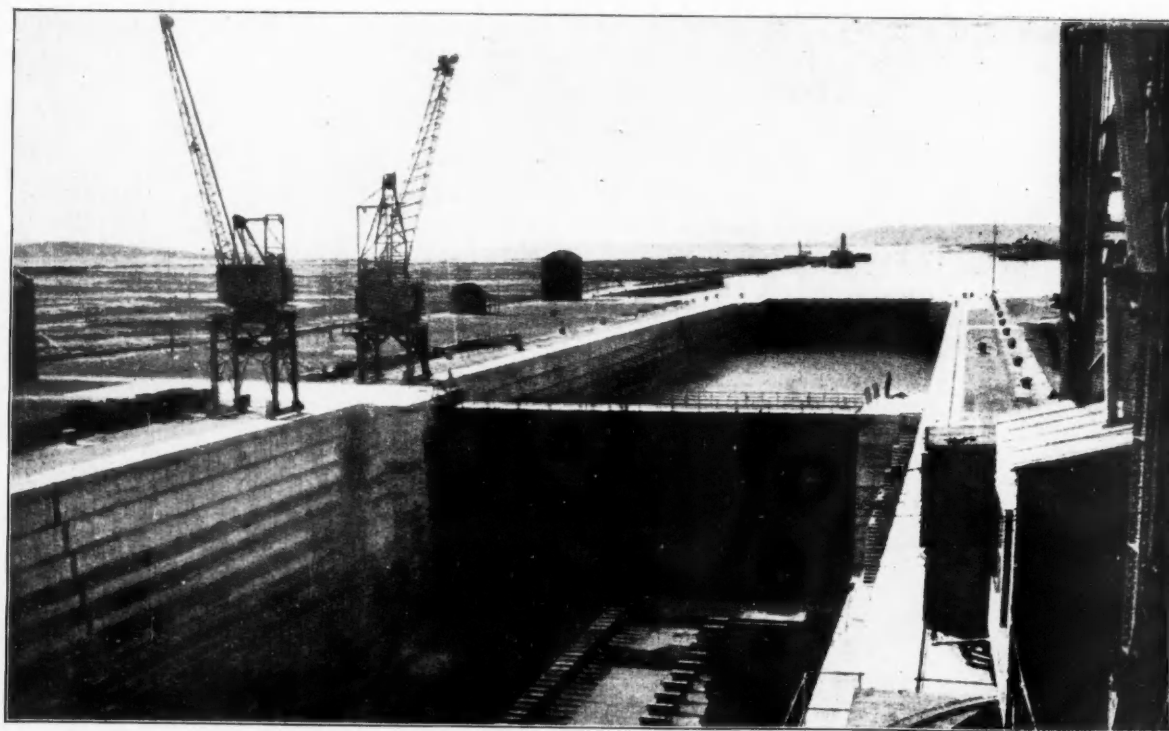


Giant Electric Cranes on the Wharf at Durban.

South African Harbour Developments



Durban's Grain Elevator, the largest in South Africa, has a capacity of 42,000 tons.

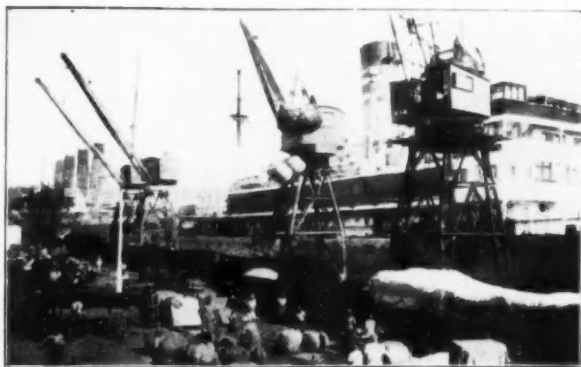


The Graving Dock at Congella, Durban, is one of the World's Largest Structures of its kind.

South African Harbour Developments—continued

Other works include a pre-cooling chamber for use in connection with the South African fruit export trade. A three-storeyed brick structure has replaced an old wood and iron shed. Other minor improvements are also under consideration and will be carried out in the near future.

The harbour in Table Bay is the oldest in South Africa, although not to-day as busy as that at Durban. Among the improvements carried out at Cape Town is the extension of the breakwater by another 1,500-ft., and a considerable portion of this work has been completed. On the other side of the docks a random mole with a total length of about 5,550-ft. is well under way. The concrete blocks for this are dumped at the rate of approximately 1,000 a month. The South Arm has also been widened considerably and new steel and concrete cargo sheds erected. These were completed only a few months ago.



An Everyday Scene in Durban's Busy Dockland.

At Port Elizabeth a breakwater is being run out from the Dom Pedro jetty, and when completed this will have a total length of 7,800-ft. Work has already been completed for a length of over 4,000-ft. at the top of the wall. The heavy seas that sweep into Algoa Bay compel the engineers to suspend work for varying periods. At North Jetty the old timber decking is being replaced by concrete and the steel structure over which it is laid being in places renewed. Reclamation work is also being carried on along the foreshore.

It is still a burning question whether Cape Town or Durban will become the southern base for the whaling fleets. A few

captains are very much in favour of having the vessels sent back to Norway for repairs and refitting. Dry-docking facilities at Cape Town are held to be inadequate. It has been pointed out frequently that at a cost of about £15,000 the authorities could instal an efficient slipway for whalers, which should not occupy too much space in the dock.



A Jetty at Port Elizabeth.
The Campanile commemorating the landing of the 1820 Settlers is seen in the picture.

Whaler captains also declare that repairing work is 50 per cent. more expensive in Cape Town than in Europe and not so quick, but such disadvantages would be overlooked if better facilities were provided. It has been pointed out to the authorities that the only extra cost whaling companies meet in sending ships to Europe is that of coal, as in any case the crews must be sent back to Norway.

The advantages of remaining in the south include less wear and tear of engines and other machinery, and less delay in starting out when the season opens. The Durban floating dock has been condemned for use in connection with large ships, and it has been proposed that this be taken to Cape Town and moored there. This dock is 475-ft. long, with a 60-ft. beam and a lifting capacity of 6,500 tons. It has already given 25 years of excellent service. Although this suggestion has much to commend it, it does not seem likely that it will be acted upon, especially as the preliminary dredging is sure to entail considerable expense.

The Port of London Authority

Twenty-second Annual Report for the Year ended March 31st, 1931

Trade of the Port

Shipping Arriving and Departing.

THE total net register tonnage of vessels that arrived and departed with cargoes and in ballast from and to foreign countries and British possessions and coastwise during the years ended 31st December, 1919-1930, was as follows:—

	Tons		Tons
1919 ...	26,335,191	1925 ...	47,061,975
1920 ...	32,758,604	1926 ...	49,278,173
1921 ...	31,089,783	1927 ...	52,576,755
1922 ...	39,293,139	1928 ...	55,423,681
1923 ...	41,214,928	1929 ...	57,578,355
1924 ...	45,392,649	1930 ...	58,085,598

Imports and Exports.

The values of the total Imports and Exports (excluding coastwise goods and transhipments under bond) of the United Kingdom and six principal ports for the year ended 31st December, 1930, were as follows:—

	1930	1929	Percentage Decrease on 1929
United Kingdom ...	1,701,565,000	2,059,816,450	17.4
London (including Queenborough) ...	603,743,000	705,237,724	14.4
Liverpool ...	351,246,000	477,077,169	26.4
Hull ...	88,969,000	109,274,207	18.6
Manchester (including Runcorn) ...	76,289,000	99,886,967	23.6
Southampton ...	76,222,000	96,207,794	20.8
Glasgow ...	70,388,000	81,695,332	13.8

Shipping paying River Duties of Tonnage.

The total net register tonnage of vessels (including deck cargo tonnage) which, not being within the exempted classes,

was liable to river duties of tonnage inwards or outwards during the twelve months ended 31st March, 1931 and 1930, respectively, was as follows:—

		1931	1930	Percentage Increase or Decrease on 1930
Foreign	Inwards	21,607,847	21,417,036	+ 0.9
	Outwards	11,230,579	11,723,156	— 4.2
		32,838,426	33,140,192	— 0.9
Coastwise	Inwards	7,011,549	7,450,958	— 5.9
	Outwards	2,408,045	2,547,587	— 5.5
		9,419,594	9,998,545	— 5.8
		42,258,020	43,138,737	— 2.5

There was thus a decrease of 880,717 tons, composed of 301,766 tons in the foreign and 578,951 tons in the coastwise trade.

Shipping using the Wet Docks.

Of the above tonnage of vessels that paid river duties of tonnage, 61.5 per cent. used the wet docks of the Authority, compared with 61.4 per cent. during the twelve months preceding, as follows:—

		1931	1930	Percentage Decrease on 1930
Foreign	Inwards	15,463,146	15,520,989	0.4
	Outwards	8,551,869	8,800,443	2.9
		24,015,015	24,321,432	1.3
Coastwise	Inwards	1,139,816	1,311,840	13.1
	Outwards	845,058	847,835	0.6
		1,982,874	2,159,675	8.2
		25,997,889	26,481,107	1.8

The Port of London Authority—continued

Shipping using the Dry Docks.

The shipping entering the dry docks of the Authority during the twelve months was 48,651 tons more than that of the previous year, viz:—

1931	1930
Tons gross 3,471,539	Tons gross 3,422,888

Goods dealt with at the Docks.

During the twelve months ended 31st March, 1931, the Authority landed or received 2,308,367 tons of import goods for warehousing or for immediate delivery, an increase of 1,434 tons, or 0.06 per cent., on the tonnage dealt with during the previous twelve months.

The stocks of goods at the end of March, 1931, in the warehouses directly controlled by the Authority amounted to 621,326 tons, as compared with 645,036 tons at the corresponding date in 1930, a decrease of 23,710 tons.

The export traffic handled on the dock quays during the twelve months amounted to 578,449 tons, being a decrease of 154,006 tons on the previous year's figure of 732,455 tons.

Finance

Borrowing Powers Authorised and Exercised.

The balance of borrowing powers unexercised at 31st March, 1931, amounted to £3,992,042, as follows:—

Total amount authorised	£	43,000,000
Borrowed:—		
(a) Port Stock issued and outstanding	34,142,698	
(b) Port Stock purchased and extinguished	447,761	
(c) Port Stock redeemed	17,499	
(d) Withdrawn from Stock Redemption Funds	2,400,000	
(e) Port of London Bills issued and outstanding	2,000,000	
	39,007,958	
Balance of borrowing powers unexercised	£3,992,042	

Stock Redeemed.

The £2,000,000 Port of London 6 per cent. Inscribed Stock issued in November, 1921, at £96 per cent., repayable at par on 1st July, 1940, or at the option of the Authority on or after 1st July, 1930, on giving six months' notice, was redeemed on the 1st July, 1930, and cancelled.

Stock Issued.

On the 23rd May, 1930, the Authority created and issued at the price of £90 10s. per cent., £2,000,000 Port of London 5 per cent. Inscribed Stock, redeemable at par on 1st June, 1970, the Authority having the option of redeeming the Stock in whole or in part at par on or after 1st June, 1950, on giving six months' notice. The issue was made for the purpose of repaying the £2,000,000 Port of London 6 per cent. Inscribed Stock, and offers were made to holders of that Stock of conversion into the new Stock.

The Stock ranks as to security *pari passu* with the 3½ per cent., 4 per cent., 4½ per cent. and 5 per cent. Inscribed Stocks and the "B" Port Stock already issued.

Port of London Bills.

Bills to the amount of £2,000,000 outstanding on 31st March, 1930, matured on 25th July, 1930, and were repaid by an issue of £2,000,000 six months' Bills which matured on 25th January, 1931. Repayment of this latter issue was made by a further issue of Bills amounting to £2,000,000, maturing on 24th July, 1931.

Temporary Advances.

Temporary advances were obtained during the year, and an amount of £367,000 was outstanding at 31st March, 1931.

Capital Expenditure.

The Capital Expenditure for the year ended 31st March, 1931, amounted to £255,584, after writing off to provisional Redemption Funds an amount of £119,100.

Utilisation of Stock Redemption Funds in Exercise of Borrowing Powers for £250,000.

A further sum of £250,000 from Stock Redemption Funds has been used for Capital purposes under the Authority's borrowing powers.

Stock Redemption Funds and Capital Redemption Account.

The amount standing to the credit of the Stock Redemption Funds at 31st March, 1931, was £977,993. The investments held on account of these Funds stand in the books at a value of £729,801, leaving a balance of £248,192 for investment or to be used in exercise of Borrowing Powers.

Supplementary to the statutory requirements in regard to Port Stock, provisional Redemption Funds are in operation for the redemption of certain expenditure in respect of which borrowing powers have not yet been exercised. The balance of these Funds amounted at 31st March, 1931, to £460,441.

The Capital Redemption Account now stands at £1,898,000, representing an increase of £250,000 during the year.

Working Results.

The following is a summary of the year's working:—

Total Revenue	£	5,828,658
Total Expenditure		4,463,606
Balance of Revenue		1,365,052
Less—		
Interest on Port Stock and Temporary Loans, Sinking Fund Charges, &c., less Interest, &c., receivable		1,404,783
Deficit		39,731
Balance brought forward from 31st March, 1930		520,632
Balance carried forward		£480,901

General Fund for the Maintenance and Renewal of Premises and Plant and for Dredging.

The balance standing to the credit of this Fund is £285,959, being a reduction of £114,104, which latter amount represents the expenditure during the year.

General Reserve Fund.

The amount of the Reserve Fund remains at £1,000,000, the statutory maximum prescribed by Section 107 (1) of the Port of London (Consolidation) Act, 1920, and is fully invested in Trustee securities which stand in the books at less than mean market prices at 31st March, 1931. The Fund reached the maximum during the year ended 31st March, 1922, from which date the interest on the investments has been credited to Net Revenue Account.

Insurance Fund.

This Fund now bears all the Authority's insurance. The amount standing to its credit at 31st March, 1931, was as follows:—

Amount at 31st March, 1930	£	605,615
Added since—Income accumulated from Investments		22,027
		627,642
Less—Losses, Reinsurances, &c., during the year		13,990
Amount at 31st March, 1931		£613,652

The investments held on account of the Fund stand in the books at a value of £605,592.

Auditor.

The Ministry of Transport re-appointed Sir William Plender, Bt., G.B.E., of the firm of Deloitte, Plender, Griffiths and Co., to be Auditor of the Accounts of the Authority for the year ended 31st March, 1931, in accordance with the provisions of Section 109 of the Port of London (Consolidation) Act, 1920.

Works and Improvements

Progress of Works.

London and St. Katharine Docks.—Good progress has been made with the reconstruction of premises at South Quay, London Dock, including the provision of a new transit shed. The rebuilding of No. 9 Shed, West Quay, London Dock, and the erection of a new electric truck charging station are practically complete. In order to facilitate the road traffic at the docks 20 entrance gates are being widened, and the work will shortly be completed. A new shed for fibres is being erected at New Gravel Lane.

India and Millwall Docks.—The new sheds and quay equipment, together with railway and road communications at South West India Dock comprising Stage 4 of the India and Millwall Improvement Works, have been completed. The remodelling of the East Wood Wharf including four new sheds and a heavy lift crane has also been completed. The whole of the scheme of improvements at the India and Millwall Docks has now been carried out. A new transit shed in place of "K" and "L" Sheds, Millwall Dock, has been erected and brought into use.

Surrey Commercial Docks.—The development of Lavender and Acorn Ponds to provide additional accommodation for the softwood traffic has been completed and the three blocks of sheds at Acorn Yard brought into use. Further improvements at the north end of Lavender Dock, comprising a new quay, sheds and a new road, are well in hand. Rail connection with the Southern Railway has also been made at South Dock.

The Port of London Authority—continued

Royal Victoria, Albert and King George V. Docks.—The Western Entrance, Royal Victoria Dock, was re-opened on 1st December, 1930, on completion of extensive repairs.

Tilbury Docks.—Substantial progress has been made with the erection of a new transit shed at the western end of the Main Dock.

Tilbury Landing Stage, 1,140-ft. long, with Baggage Hall, etc.—The whole of these works, including the remodelling of Tilbury Station by the London, Midland and Scottish Railway Company, has been completed. The Landing Stage was formally opened by the Prime Minister, the Rt. Hon. J. Ramsay MacDonald, LL.D., M.P., on the 16th May, 1930, when the P. and O. liner "Mongolia" was berthed alongside to embark passengers.

Government Assistance.—Several of the above works have been carried out with financial assistance from the Government Unemployment Grants Committee.

River.—A new building to accommodate the staff at Kew Toll House is in course of erection, and will be completed at an early date.

River Moorings.—Two new mooring berths for ships have been provided at Swanscombe and Woolwich, while the accommodation at five other tiers has been improved by dredging. Three moorings have also been provided at Battersea, Charlton and Swanscombe as approved halts for barges laden with petroleum spirit.

Dredging.—During the year 2,230,384 cubic yards of material were removed from the river in order to maintain and deepen the channels. The quantity of mud removed from the docks during the same period was 1,243,609 cubic yards. The dredging of the Surrey Canal has been completed.

General.—Substantial progress has been made during the year with the approved programme for bringing the Authority's Undertaking and its equipment into an adequate state of repair and up-to-date condition. Further authorisations in the pursuance of this policy have been made for the ensuing year.

General**Reduction in Rates.**

Reduced charges for dock dues and rent on shipping were brought into operation on the 1st September, 1930. Reductions were also made in port rates and in dock charges on certain goods.

Commercial Visit to Canada and Newfoundland.

The publicity officer, accompanied by an assistant from the Commercial Department, visited the principal cities of Canada and Newfoundland in order to make better known the facilities in the Port of London.

Exhibition at Buenos Aires.

Arrangements were made for the Authority to participate in the British Empire Trade Exhibition held at Buenos Aires from February to April, 1931, where they were represented by the Publicity Officer, who afterwards visited other important places in South America, among which were Rio de Janeiro, Sao Paulo, Santos, Valparaiso, etc.

Wreck Service.

Twenty-four vessels were removed from the river by the wreck-raising plant during the year, viz.:—one steam tug measuring 30 tons, 20 sailing vessels and barges measuring 1,234 tons, and three small motor craft. In addition, 13 sailing vessels and barges measuring 625 tons were removed from the docks.

Floods Prevention.

A Conference of various interested bodies, convened by the Ministry of Health, was held on the 27th November, 1930, to consider the question of co-ordinating all activities relating to flood prevention in the tidal portion of the River Thames. The Authority was represented at the Conference by the Chairman, the Vice-Chairman and the General Manager, and a Committee was appointed to investigate fully the whole question.

As a result of the proceedings of the Committee, the Minister of Health set up a Departmental Committee, on which the General Manager was appointed to represent the Authority, with the undermentioned terms of reference:—

"To consider the present organisation for the prevention of damage by floods in the tidal portion of the Thames and to make recommendations as to the further measures, if any, that may be necessary, as to the Authority or Authorities to which the duty of carrying out any such measures should be entrusted and as to the basis on which the cost should be distributed."

Parliamentary—London County Council (Charing Cross Bridge) Bill.

The Authority's requirements in respect of the embankment line and the headways, etc., of the proposed bridge were agreed with the London County Council, and the necessary clauses and amendments were inserted in the Bill to safeguard the Authority's rights with regard to river works and to meet the requirements of navigation in the event of the proposed works being commenced before the completion of the reconditioning of Waterloo Bridge. The Bill did not, however, proceed beyond the Committee stage.

The Council subsequently set up an Advisory Committee to prepare and submit an agreed scheme for a road bridge and approaches, and the Vice-Chairman of the Authority was appointed a member of that Committee.

Surrey County Council Bill.

Under this Bill the Council sought (*inter alia*) similar powers and duties for flood prevention within the County of Surrey to those exercised by the London County Council under the Thames River (Prevention of Floods) Acts, 1879-1929.

Representations were made by the Authority to the Minister of Health that, in view of the appointment of a Joint Committee to consider the desirability of co-ordinating all activities relating to flood prevention in the tidal portion of the river, it was premature for any one body to seek such powers. The provisions were subsequently taken out of the Bill.

Middlesex County Council Bill.

By this Bill the Council are seeking powers to become the main sewerage authority for the western area of the county and to carry out an extensive scheme for main sewerage and sewage disposal works.

The scheme provides for an outfall in the River Thames at Isleworth, and by agreement with the Council clauses have been inserted in the Bill to ensure that the effluent discharged from the outfall shall conform to a standard of purity not less stringent than that recommended in the Eighth Report of the Royal Commission on Sewage Disposal, and to safeguard the Authority's statutory rights with regard to the construction of works in the river.

Knighthood of the General Manager.

The Authority recorded with gratification the conferring by His Majesty The King of the honour of Knighthood on the General Manager, Sir David J. Owen.

Election of Members—Regulations.

Revised regulations with respect to the formation and revision of the register for the election and the method of election of elected Members of the Authority, designed mainly to secure greater equality in the representation of the respective interests of "Goods" and "Vessels" and to provide for the separate representation of "Owners of River Craft," received confirmation by the Minister of Transport on the 25th April, 1930.

P.L.A. Notes: London's Shipping

During the week ended August 28th 1,211 vessels, representing 1,014,518 net registered tons, used the Port of London; 551 vessels (831,355 net registered tons) were to and from Colonial and foreign ports and 660 vessels (183,163 net registered tons) were engaged in coastwise traffic.

During the week ended September 4th 954 vessels, representing 970,351 net registered tons, used the Port of London; 566 vessels (816,700 net registered tons) were to and from Colonial and foreign ports and 388 vessels (153,651 net registered tons) were engaged in coastwise traffic.

During the week ended September 11th 1,067 vessels, representing 1,012,864 net registered tons, used the Port of London; 540 vessels (791,646 net registered tons) were to and from Colonial and foreign ports and 527 vessels (231,218 net registered tons) were engaged in coastwise traffic.

During the week ended September 18th 931 vessels, representing 938,462 net registered tons, used the Port of London; 553 vessels (792,285 net registered tons) were to and from Colonial and foreign ports and 378 vessels (146,177 net registered tons) were engaged in coastwise traffic.

Tilbury Passenger Landing Stage.

Forty-five vessels, representing 392,890 gross registered tons, used the Tilbury passenger landing stage during the month of August. Altogether over 12,000 passengers were embarked or disembarked at the stage, together with considerable quantities of baggage and mails.

Irish Harbour Matters



Unloading Tobacco at North Quay Extension, Dublin, 27th June, 1931. Direct Shipment of Tobacco from America by the S.S. "Bannack."

Kerry

Tralee Harbour Board.

MR. J. LAWLOR, Secretary, Tralee Harbour Board, writing to the Kerry County Commissioner regarding proposed renewals and improvements of Fenit Pier, put before him Mr. P. H. McCarthy's plans and estimates, which could be divided into two schemes—No. 1: The renewal of viaduct at a cost of about £40,000. No. 2, The renewal of viaduct and improvements to pier, £90,000. The Board propose in the case of No. 1 scheme to ask the Government for a free grant of £20,000 and to raise by loan the balance of £20,000, the Commissioner giving his consent to the new loan getting priority over the present mortgage debt. The Board propose in the case of No. 2 scheme to ask the Government for a free grant of £30,000, the County Council to subscribe £30,000 by way of loan or otherwise, and the Harbour Board to raise the remaining £30,000 with the permission of the County Council.

Cork

Cork Harbour Board's Request.

At a meeting of the Cork Harbour Board, it was resolved, on the motion of the Chairman, Mr. Richard Wallace, seconded by Capt. Collins, to ask the Free State Minister for Industry and Commerce to introduce legislation on the findings of the Ports and Harbours Tribunal, which in the opinion of the Commissioners was long overdue. Alternatively they asked that the Cork Harbour Board Bill of 1927 be allowed to proceed. The Chairman explained that they wished to equalise the position as regards shipping and cargo dues in Cork. Shipowners were paying proportionately less in dues than elsewhere, and the Board, in order to obtain their revenue, had had to increase the rates on goods.

Deep Water Quay at Cork Harbour.

At a meeting of the Queenstown (Cobh) Council, the question of harbour development was considered and a motion was passed asking the Cork County Council, the Harbour Board, and several Urban Councils to co-operate with the Queenstown Urban Council in the development of the lower harbour. During the discussion reference was made to the proposed developments

at Galway, and the Secretary read a letter from Mr. J. Hennessy, T.D., in which he stated:—

"If the Galway port authorities are active in the development of their own business, what have we to say to it? The Trades Loan Act was passed by the Oireachtas equally for Cork or Cove as for Galway, and if our port authorities make application under the Act it will get the same consideration as Galway or any other centre. The grant rumour is like all other rumours of a similar nature floating about—idle gossip.

"The development scheme at the Deep Water proposed and placed before the Ports and Harbours Tribunal is the only practical development in our port. Its cost would be comparatively small, while the results to the port and the county would be enormous. Yet the Councillors who talk of the Galway people doing their business in their own way, do not, I understand, favour the Deep Water development.

"However, the Lower Harbour Development Committee is constantly keeping the scheme before the Cork port authorities and the Government, and I am confident of its ultimate success. Instead of talking about something in the air, such as the Galway grant, I suggest the Council would talk about, and concentrate on, a practical scheme within the port, that is the development and extension of the Deep Water Quay to Whitepoint."

Mr. E. Carey, T.D., said he felt the Cork Harbour Board were responsible for anything that was retarding the progress of the lower harbour, and that if they co-operated they would find no difficulty in developing it.

Limerick

Limerick Port Development Scheme.

It was reported at a meeting of the Limerick Harbour Commissioners that the guarantee loan of £100,000 for harbour improvements would probably be sanctioned by the Minister for Finance. There had, however, been delay in the matter, and it was pointed out by the Engineer, Mr. T. F. O'Sullivan, that it could not be a question of the ability of the Harbour Commissioners to meet the charges on the loan, for the revenue of the port was steadily increasing, as could be seen from

Irish Harbour Matters—continued

the Secretary's statistical return for the past ten years. Then the audited accounts for 1930 presented features of interest as showing the prosperity of the port. These figures had been for some time in the hands of the Minister for Industry and Commerce, who had done everything to expedite the carrying out of the works, but the Finance Department stood in the way.

Drogheda**Drogheda Harbour Board: Election of Members.**

To take the place of members retiring by rotation from the Drogheda Harbour Board, the following nine candidates were elected:—Alderman John Dowd, Thos. Malloy, Robt. Webster, Lawrence Stantey, Vincent Smith, Thos. McKeever (Bellewstown), Col. Cecil Thornhill, Joseph Kelly, and Peter Lynch. Messrs. Smith, McKeever and Kelly are new members.

Belfast**Dock Charges and Dues: Striking Belfast Reply.**

On behalf of the Belfast Harbour Commissioners, Mr. M. J. Watkins, General Manager and Secretary, has sent a striking reply to the Traders' Co-ordinating Committee on Dock Charges relating to the question of dues and charges at United Kingdom ports. Mr. Watkins wrote:—

"I am instructed to say that the Belfast Commissioners are in entire sympathy with the objects which your Committee have in view, and they have for years past devoted constant consideration to the question of reducing dock and port charges. As evidence of this I may mention that since 1922 they have effected reductions equivalent to £80,000 per annum. The latest reductions were made as from January 1st last, being 15 per cent. on cross-channel and coastwise ships and 7½ per cent. on foreign-going ships. Considerable reductions were also made in the harbour rates on goods.

"Moreover a valuable concession was made in the case of foreign-going ships, whereby such ships, when discharging less than half their net register tonnage and loading not more than 10 per cent. of their net register tonnage (or vice versa) were charged only half of the normal rate. The figures given in your letter certainly show the port of Belfast in a favourable light in comparison with other ports, but even so, they do not fairly represent the case.

"For instance you give the Belfast rates as 4d. per net register ton in 1913, 9d. per net register ton in 1920, and 1s. per net register ton in 1930.

"I do not know how these figures have been made up, as the actual figures are as follows:—Cross-channel ships, per ton net register: 1913, 5.5d. per ton; 1920, 8.75d. per ton; 1923, 7.35d. per ton. Foreign-going ships: 1913, 7.5d. per ton; 1920, 1/6.75d. per ton; 1923, 1/3.75d. per ton; 1931, 11.1d. per ton.

"From these figures it would appear that the dues at Belfast are 200 per cent. more than in 1913, and 33 per cent. more than in 1923; whereas the case actually stands as follows:—Cross-channel rates, 7 per cent. below 1913, 42 per cent. below 1920, and 30 per cent. below 1923.

Foreign-going rates, 48 per cent. above 1913, 41 per cent. below 1920, and 30 per cent. below 1923.

"In the latter case a number of vessels are able to avail themselves of the arrangement whereby they are only charged half rates. This makes the position in Belfast even more favourable than the actual figures indicate.

"From the foregoing it will be obvious that the Belfast Harbour Commissioners have dealt drastically with all dues and charges over which they have any control. They have no control over other charges, such as port labour rates, towage, etc., and these must be the subject of direct action on the part of shipowners themselves."

Increasing Traffic.

At the meeting of the Belfast Harbour Board on the 1st September the Harbour Master (Captain McIntyre) submitted his usual report, which showed that 287 vessels arrived at the port during the period from 16th to 29th August, as follows: Coastwise and cross-channel, 251; foreign, 27; non-trading, 9.

The total tonnage of the vessels which arrived from the 1st January to the 29th August was as follows:—Coastwise and cross channel, 1,892,780, being an increase of 22,384 over the corresponding period last year. Foreign, 499,033, an increase of 38,510. Non-trading, 65,274, a decrease of 16,501. Total: 2,457,087, an increase of 44,393.

Activity at Foreign Docks.

During the past month the activity at the foreign-going docks in Belfast has been pronounced. On one day there were over a dozen big ships of this type at the docks, and as soon as they were discharged others arrived to take their places. Ships come and go, but the inflow of maize from the River Plate continues in a strong and steady stream. When it is remembered that the average cargo steamer carrying maize from the Plate ports to Belfast brings about 6,000 tons in bulk, and that the docks were filled with this class of freight for several weeks, an idea is gained of the enormous demand in Ulster for Indian corn.

The greater part of the grain is used in the manufacture of feeding stuffs for cattle and, according to one merchant, while the demand for stall feeding was greater to-day than ever, the consumption was constantly increasing, and would continue to do so.

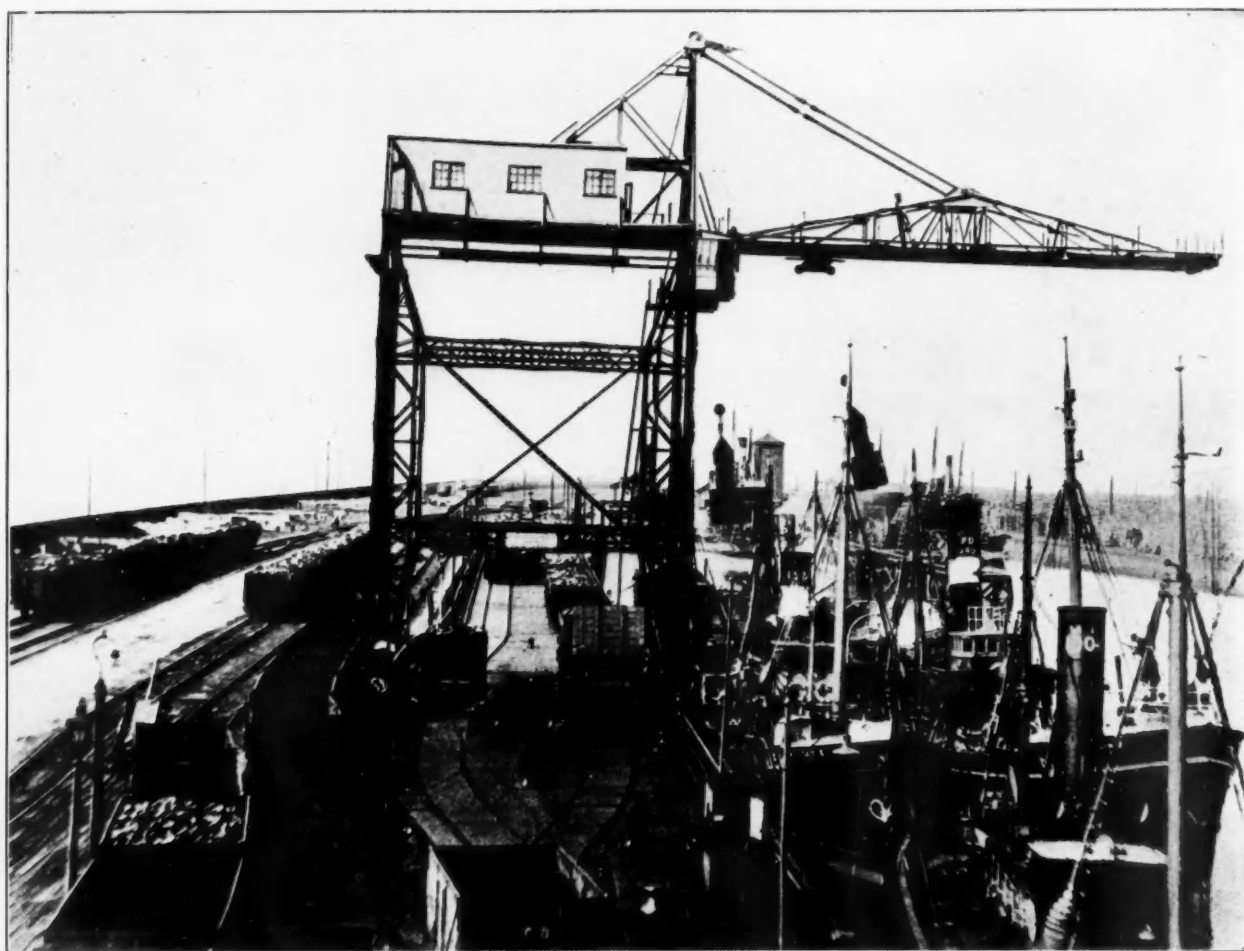
Governor Visits the Harbour.

His Grace the Duke of Abercorn, Governor of Northern Ireland, was the guest of the Belfast Harbour Commissioners on the 20th August. His Grace was met at the Transatlantic sheds by the Chairman of the Board (Mr. R. E. Herdman, D.L.), and other Commissioners, together with the chief officials. The party embarked on the tender "Musgrave" and made an inspection of the various features of interest on the harbour estate, including the new dock scheme.

Later in the day the party assembled at the Harbour Office, where his Grace, with a few prominent citizens, was entertained to lunch. The proceedings were private. The arrangements for the visit of his Grace were carried out by Mr. M. J. Watkins, General Manager and Secretary, in his usual efficient and capable manner.

*Limerick Docks.*

Hull and the Humber



Electric Cantilever Coaling Crane at the London and North-Eastern Railway Company's St. Andrew's Dock, Hull.

The Humber Bridge Bill and the New Government.

GREAT interest continues to be taken in the future of the Hull Corporation's Bill to construct a road bridge over the River Humber in the vicinity of Hull to connect the Port of Hull with Lincolnshire and the South. The Bill, after a lengthy hearing, has passed through all its stages in the House of Commons and a Select Committee of the House of Lords had been appointed to consider the proposal in the Upper House. The sudden and unexpected change in the political situation, and the accession of a new Government to office has, however, put the Bill in danger, and the promoters have made application for the Committee stage to be expedited as much as possible. The Hull Corporation have been informed by their Parliamentary Agents in London that provided Parliament is sitting on or about October 6th and is likely to sit for a period long enough for the Committee to complete its work, the Chief Committee Clerk of the House of Lords hopes to arrange for a Committee to be appointed for about that date. As it is probable that a month will be required for the hearing, so strenuously is the Bill being opposed, the difficulty of gauging the life of Parliament in the present circumstances must obviously reflect itself in the attitude of those responsible for the arrangements for the hearing of private bills.

Construction of Training Walls Advisable.

The House of Commons Committee found that if the bridge were to be built it would also be advisable or necessary that training walls should be constructed in the Humber, presumably on the lines of a schedule adopted some years ago by the Humber Conservancy Board, but so far carried out only in part.

Effect of the Cost on Shipping using the Port.

Mr. Minnitt Good, commenting upon this at a meeting of the Hull Chamber of Commerce and Shipping in September, remarked that the figure they had before them was £1,200,000, but this, he pointed out, was only the estimated cost of training walls to Reed's Island. There was also an additional cost,

so far as Goole was concerned, of bringing training walls from Reed's Island to the main span of the bridge with which Goole would be satisfied. But, he asked, what about Hull? Mr. Good said that it was very certain that the cost of training walls in the Humber would reach the sum of 7 or 8 million pounds, or possibly more. If the walls were built at that cost, even provided there be a Government grant of 50 per cent., it would mean a burden on the trade of Hull of many pounds per ton both ships and cargoes. Mr. Good urged the abandonment of "this vain-glorious scheme" in the interests of national economy, because so far as the commercial community of Hull, and many outside, were concerned, it was of no immediate value. It was absolutely essential that the costs of the port should be kept at the lowest possible level.

Demand for Reduction in Dock Dues.

At the same meeting Mr. Edward Dumoulin made a demand for a reduction of dock dues on shipping and moved a resolution for submission to the autumn meeting of the Association of British Chambers of Commerce, welcoming the action taken by the Co-ordinating Committee on Dock Charges with a view to persuading port authorities to reduce dock dues and other port charges. Such action, he said, was already overdue to assist the import and export trade of the country. Mr. Minnitt Good observed that whilst there had been reductions at ports managed by private or public authorities, there had been no reductions at ports owned by railway companies. Also, whilst there had been no reduction in the cost of labour, there had been a very material reduction in stevedoring charges at Hull. If stevedores could reduce their charges, he added, it seemed incredible the railways could not follow suit.

Retirement of Dock Official.

Capt. W. S. Smith, assistant dock master at the King George Dock, Hull, has retired to live in the south of England. Captain Smith went to the dock on its opening by H.M. the King on July, 1914, and has won the respect and confidence of all with whom he came in contact. He first sailed out of Hull as second mate of the sailing vessel Thessalus after starting his career as a cadet on H.M.S. "Conway."

North-East Coast Notes.



Entrance to Blyth Harbour. Import Dock on right.

Dock Charges on the Tyne.

THE Tyne Improvement Commission has addressed a letter in reply to the communication recently received from the Traders' Co-ordinating Committee on Dock Charges, so far as it related to the Tyne. They stated that falling revenue consequent on a reduced volume of trade and ever-increasing cost of carrying-on during the war and afterwards, demanded a larger revenue. In common with other port authorities the Tyne Improvement Commission had of necessity, therefore, to obtain statutory authority for additional charging powers. That authority was secured by way of percentage increase over the pre-war authorised maxima. Various applications were made and granted under D.O.R.A. during the war. In 1919 the Commissioners obtained from Parliament authority for a permanent increase of 50 per cent. Circumstances called for a further application to Parliament in 1920, and 100 per cent. was granted for a period of five years. But long before the expiration of the five years period (i.e., in 1922) the Commissioners made a substantial cut, and in every year since then, without exception, further cuts have been made. The result has been that from and including 1922 to the present time, the Commissioners had remitted by way of concessions a sum approaching £2,500,000, representing an average of £300,000 a year. A further result of those concessions was that some of the rates and dues chargeable by the Commissioners were now below the pre-war level, others were at the pre-war level, whilst others (and only one or two) carry the maximum increase of 50 per cent. Taking together the whole of the rates and dues which the Commissioners were authorised to levy, the average increase at present charged over the pre-war rates is 31 per cent. It was the settled policy of the Commission to reduce the charges from time to time as finances allow, but they feel that they have for the present gone as far as it was possible for them to go having regard to the statutory obligations imposed upon them in respect of their undertaking, their duty to their bondholders, and the necessity for maintenance of their financial credit.

Big Scheme Postponed.

At the meeting of the Tyne Commission in September it was announced that the important scheme for the development of Jarrow Slake by the construction of berths for large vessels, and the acquisition of Tyne Dock (which adjoins) from the London and North Eastern Railway was to be postponed *sine die*, in view of the national financial situation and the uncertainty of the trade position. The trade reports submitted at the same meeting were generally of an unsatisfactory character. The coal and coke shipments for the eight months totalled 9,339,596 tons, compared with 11,551,573 tons last year, a decrease of 2,211,977 tons, or 19.15 per cent. and 30.07 per cent. compared with 1913. The tonnage launched on the river during the eight months was half that for the corresponding period of last year. This year 16 vessels of 104,758 tons had been put into the water, against 42 vessels of 212,537 tons last year. Idle shipping also showed an increase at the end of August, there being 153 vessels laid up, of 285,576 tons.

New Crane on the Tyne North Pier.

To replace an old crane which has been in service for over 35 years, a new travelling Titan crane has been erected on the North pier of the Tyne. The new crane embodies a number of valuable new improvements on the old one, and it is capable of handling concrete blocks 40 tons in weight with an 80-ft. radius. The crane, which was built by Messrs. Cowans, Sheldon and Co., of Carlisle, to the specification of the engineer's department of the Tyne Improvement Commission, is perfectly controlled by hydraulic brakes, and auxiliary hoisting gear is utilised for loads up to ten tons.

Port Performances.

A good bunkering performance is reported from the Tyne Commission staiths at Whitehill Point, North Shields. The steamer "Demert-ton" arrived at 4.40 p.m. on the 9th September and began loading at 5.15 p.m. and finished at 11.45 p.m., having taken on board 1,548 tons of bunker coal. The vessel sailed from the port at 2.0 p.m. the following afternoon.

The London and North Eastern Railway Co. report that the steamer "Kylce" arrived at North Blyth at 12.15 p.m. recently, was berthed at No. 11-12 spouts, and took a cargo of 4,300 tons of Ashington coal and 100 tons of bunkers, the whole of the loading was completed by 9.30 p.m. the same day.

Sir Robert Ropner and Co.'s steamer "Sedgepool" left the South Dock, Sunderland, recently with one of the largest cargoes loaded in the port. The vessel arrived in the afternoon, began to load at 5 o'clock next morning, and finished at 1.15 p.m. two days later, having taken 8,714 tons of cargo, coal and bunkers.

The London and North Eastern Railway Co. report that the steamer "Anna Sofie" recently had an exceptionally rapid discharge of timber at West Hartlepool. The vessel arrived with 1,351 fathoms (3242 loads). The time taken to discharge was 30 working hours, so that the average rate was 108 loads per hour. The total crane hours were 85 hours 20 minutes, so that the average rate of discharge per crane was practically 38 loads.

Wear Coal Trade Statistics.

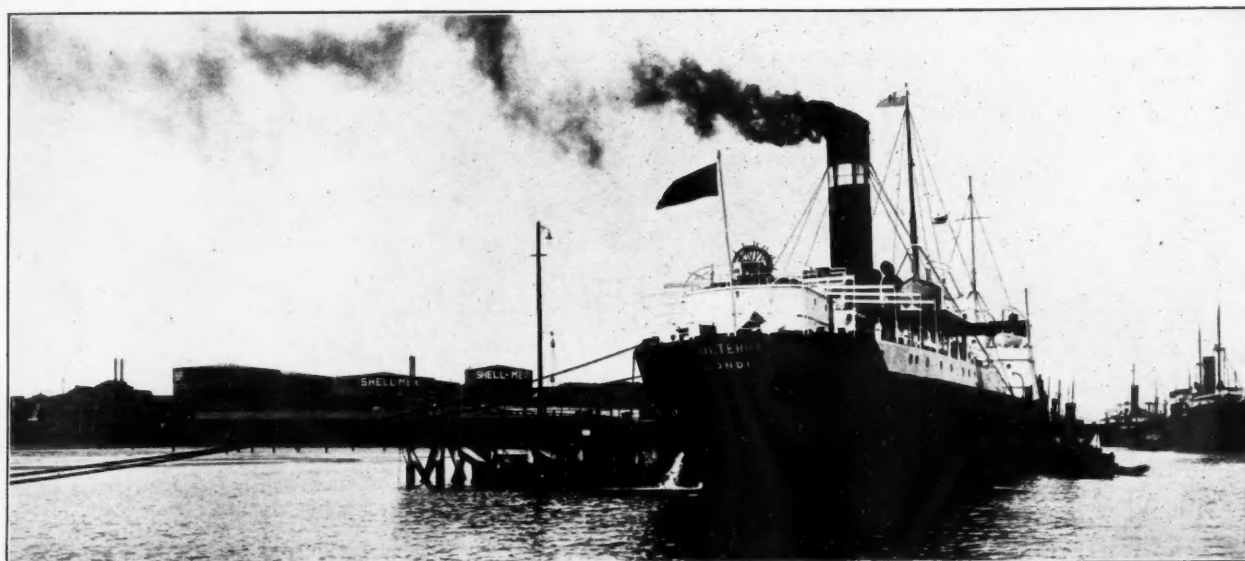
There has been a distinct improvement in the Wear coal and coke shipments recently, and the latest figures available for the first seven months of this year—show a decrease of only four per cent., compared with 5.8 per cent. for the first six months. It is interesting to note that there is a very marked improvement in the trade at the docks. Appended are details of the past seven months coal shipments:—

	1930 Tons	1931 Tons	Percentage of Increase or Decrease
Germany	355,020	248,965	30 dec.
Netherlands	94,395	95,305	—
Belgium	56,251	59,075	6 inc.
France	374,010	294,190	21 dec.
Italy	147,550	144,110	2 dec.
Other Countries	382,617	392,050	3 inc.
London	879,482	850,437	3 dec.
Other Coast Ports	317,586	347,640	10 inc.
Total	2,606,911	2,429,772	

The total coal shipments, with the addition of bunkers, were for 1930—2,766,876 tons; 1931—2,648,432 tons. The coke shipments were 44,350 tons, compared with 45,230 tons last year, a decrease of 2 per cent.

The coal shipments from the Hartlepoons during July were 258,034 tons, making a total for the seven months of the year of 1,754,796 tons; this was between five and six per cent. less than the shipments for the same period of last year. When these figures were laid before the last meeting of the Hartlepoons Port and Harbour Commission, Mr. William Ropner, the Chairman, said that the decrease in the bunkering figures were disappointing. Many steamers had been leaving the River Plate in ballast and bunkering at the Tyne, where there was a much larger choice of bunkers than at the Hartlepoons.

North-East Coast Notes—continued



Oil Fuel Installations at Jarrow Slake.

Personalia.

Mr. Matthew Coulson James, managing director of the Mercantile Dry Dock Co., Ltd., of Jarrow, has been elected chairman of the Company. It was a graceful compliment to devoted service to the firm for nearly 40 years.

Mr. William Cochran Carr, of Benwell, has been elected president of the North of England Institute of Mining and

Mechanical Engineers. He is one of the best known figures of the coal trade of Northumberland.

Mr. John R. D. Bell and Mr. Charles Irwin have been appointed vice-presidents of the Council of Newcastle and Gateshead Chamber of Commerce. Both gentlemen are prominently associated with the local coal trade. Mr. Bell is a member of River Wear Commission.

Aden Port Trust.

The returns for the month of June, 1931, of shipping using the port, were as follows:—

	No.	Tonnage
Merchant Vessels over 200 tons ...	119	453,925
" under 200 tons ...	5	783
Government Vessels ...	6	11,970
Dhows ...	92	2,235
Merchant Vessels over 200 tons ... PERIM.	26	98,797

Rs.42,12,000/- as compared with Rs.45,23,000/- for June, 1930, and of Exports Rs.30,04,000/- as compared with Rs.32,83,000/-.

The total value of both Imports and Exports together was Rs.72,16,000/- as compared with Rs.78,06,000/- for the corresponding month last year.

Imports during the month were above those for June, 1930, in the case of coffee, gums and resins, raw hides, raw skins, grey piece goods, unmanufactured and manufactured tobacco;

TRADE OF THE PORT.

Article.	Unit.	Imports.		Exports.	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal ...	Tons	3,835	80,449	0	0
Coffee ...	Cwts.	7,866	2,62,348	8,180	3,65,455
Grain, Pulse and Flour ...	"	40,182	2,06,552	25,800	1,35,733
Gums and Resins ...	"	2,698	56,725	1,806	39,283
Hardware ...	"	0	10,013	0	15,931
Hides, raw ...	No.	6,970	13,945	7,410	13,202
Oil, Fuel ...	Tons	33,777	10,13,310	0	0
" Kerosene ...	Gls.	86,733	62,896	2,368	1,911
" Petrol ...	"	320	400	1,216	1,545
Salt ...	Tons	0	0	30,630	3,20,000
Seeds ...	Cwts.	2,254	22,118	446	6,465
Skins, raw ...	No.	346,982	2,34,544	460,420	3,74,283
Sugar ...	Cwts.	7,122	48,948	14,854	91,476
Textiles—					
Piece Goods, Grey ...	Yds.	3,187,486	5,03,420	2,491,510	3,81,602
" " White ...	"	391,663	91,027	229,220	54,818
" " Printed or Dyed ...	"	583,246	1,44,312	635,725	1,82,560
Twist and Yarn ...	Lbs.	105,100	58,578	115,498	73,397
Tobacco, Unmanufactured ...	"	1,188,768	2,39,328	815,024	1,53,778
" Manufactured ...	"	47,712	51,524	41,226	49,795
Other Articles ...	No. of Pkges.	36,733	7,06,296	21,516	4,15,143
Treasure, Private ...	"	0	4,14,724	0	3,28,010
Total ...	—	—	42,12,257	—	30,04,387

The number of merchant vessels over 200 tons that used the Port in June, 1931, was 119 as compared with 123 in the corresponding month last year and the total tonnage was 454,000 as compared with 500,000.

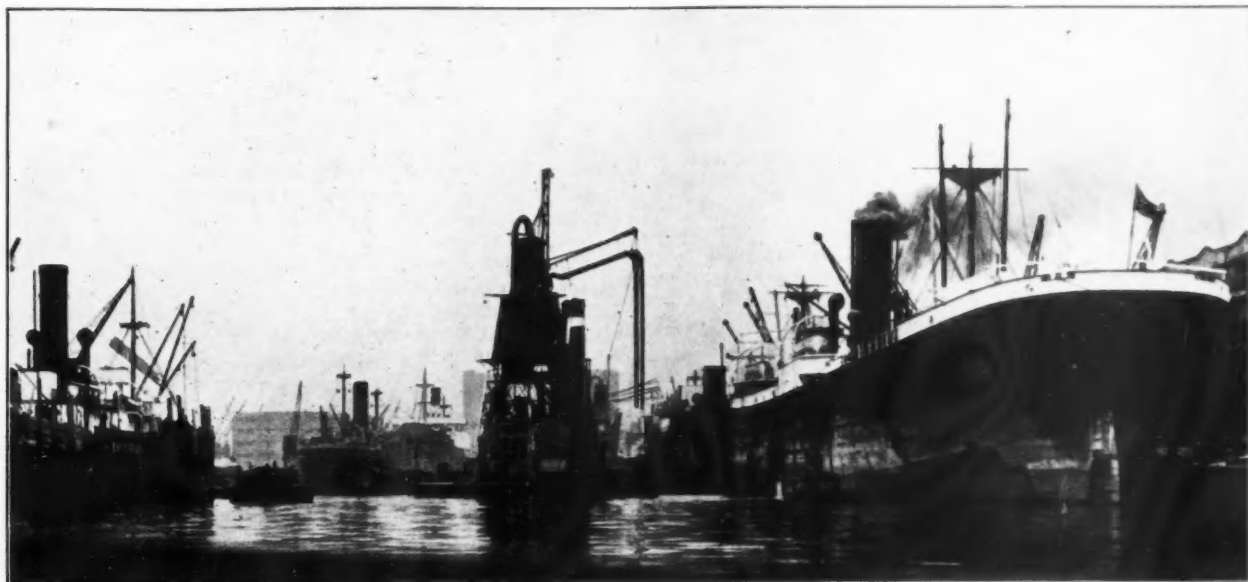
Excluding Coal, Salt, Fuel Oil and Military and Naval Stores and transhipment cargo the total tonnage of Imports in the month was 7,200 and of Exports 5,300 as compared with 8,000 and 4,500 respectively for the corresponding month last year.

The total value of Imports excluding Government stores was

and below in the case of grain, pulse and flour, hardware, seeds, sugar, white piece goods, printed or dyed piece goods, twist and yarn, and private treasure.

Exports were above those for June, 1930, in the case of coffee, seeds, raw skins, sugar, printed or dyed piece goods, unmanufactured and manufactured tobacco; and below in the case of grain, pulse and flour, gums and resins, hardware, raw hides, grey piece goods, white piece goods, twist and yarn, and private treasure.

Notes from the North



A View of the Manchester Docks. In the centre is shown a Pneumatic Elevator used for the rapid discharging of Bulk Grain.

Future of Birkenhead Ferries.

THE last word has not been uttered on the future control of the Birkenhead ferries, in view of the approaching completion of the Mersey Tunnel. Some weeks ago the Tunnel Joint Committee decided, against the solid vote of Birkenhead members, to take over control of the whole of the Birkenhead ferries undertaking for a period of 21 years from the opening of the tunnel. It was pointed out at the time that the loss of revenue which Birkenhead would suffer as a consequence of the opening of the new tunnel would virtually increase Birkenhead's tunnel commitments from 4½d. in the £ to something nearer 1s. The Birkenhead members of the Tunnel Committee recently conferred with the Ferries Committee, and as a result the matter will be raised at the full tunnel meeting.

Members of the joint committee both from Liverpool and Birkenhead visited one of the Birkenhead entrances of the new tunnel and proceeded a short distance down the incline to inspect examples of the lining suggested for the tunnel. Short lengths of lining of tiles, glass and cement were prepared for inspection, and the effect of the different sections was noted. What system of lining will be adopted has not yet been decided.

Retirement.

Mr. Fred Ellison, on retiring from the position of wharf manager at the Weston Point Docks, Runcorn, after completing over forty-four years in the service of the Weaver Navigation Co., was presented with a smoker's cabinet and a set of bowls.

Dock Grain Warehouse.

Mersey Docks and Harbour Board has confirmed the following minute in the proceedings of the Docks and Quays Committee:—"The committee having had under consideration a letter from the Liverpool Corn Trade Association, Ltd., as to providing additional accommodation for the storage of grain and report thereon, and a memorandum from the Warehouse Committee on the subject having been submitted, it was resolved to recommend that the Alfred Dock be appropriated for the reception of vessels, the cargoes whereof shall be loaded and discharged by persons employed by the Board, and that the following arrangements do apply:—

(1) The shed on the north side of the Alfred Dock to be placed at the disposal of the Warehouse Committee for a period extending from the date upon which it may be necessary to bring the shed into use for the storage of grain, to March 31st next.

(2) The Board to consent to cargoes being loaded and discharged into or from vessels at all parts of the Alfred Dock by persons not employed by the Board, except at the berth on the north side of that dock."

Heavy shipments of grain are being made from Australia, the River Plate, Russia, and other areas. Every yard of space in the Board's storage depots—the Waterloo Dock warehouse on the Liverpool side and the East Float grain warehouse, Birkenhead, is said to be fully occupied. Liverpool will probably

receive the first commercial grain shipment from the new port of Churchill, Manitoba, on Hudson Bay. Approximately 600,000 bushels have been assembled at the port's new elevator, which has accommodation for 2,500,000 bushels, and this consignment will be shipped by two steamers. The elevator was completely finished two weeks ahead of the scheduled date, and at the docks the last section of this year's cribwork has been finished, completing 1,800-ft. of deep water wharfage. The facilities at the elevator make it possible to unload four trains at one time, the cars running over four rocker dumps, each having an unloading capacity of 20 cars an hour.

Great Western Railway Crane Contract.

The Great Western Railway Company has placed a contract with Messrs. J. H. Wilson and Co., of Birkenhead, for the supply of twenty-eight six-ton fixed hand cranes for Bristol, Reading, Didcot, Weston-super-Mare, and other stations in South, West and Central Wales.

Birkenhead Dock Bridge.

Mersey Docks and Harbour Board has authorised its engineer to construct a temporary bridge over the Egerton-Morpeth passage, Birkenhead, and lay down lines of rails for the use of traffic during the period of the work on the new bridges at Birkenhead. The Unemployed Grants Committee has agreed that the cost of the work shall rank for grant under the scheme for the construction of five rolling lift bridges.

Problem for Embankment Commissioners.

How the Wallasey Embankment Commissioners will tackle the difficulties of a flooded Birket, which, after all, is connected with the Wallasey Embankment, remains to be seen. The Birket discharges into the Birkenhead main sewer and when the automatic gates are closed at high Mersey tide, the low-lying land gets flooded. Can an outlet be found by way of the Embankment? This is a problem which the Wallasey Embankment Commissioners may consider. A breach extending between fifty and sixty feet in all along the Harrison Drive Embankment, on the Wallasey foreshore, was recently caused by the action of the high wind and tide. The concrete top has been ripped away and part of the foundations destroyed. Fortunately the damage has not extended very deeply, although it represents about £800.

Traffic Trouble.

Proposals have been put forward by the Liverpool transport interests to overcome the trouble that is caused during the morning and late afternoon rush hours by the hold-up of lorries at the Liverpool Pierhead. The suggestion is that all traffic should be regulated in such a way as to fill all the luggage boats available, before allowing any other vehicles to collect on the Landing-stage. By this means both the existing traffic lines on the floating roadway would be open for traffic arriving at Liverpool from the Cheshire side, one to be used by light vehicles and the other by heavy vehicles.

*Notes from the North—continued***Wallasey's New Ferryboat.**

The new £43,000 Wallasey Corporation ferry steamer to be constructed at Messrs. Harland and Wolff's to take the place of either the "Royal Iris" or the "Royal Daffodil," which are to be put out of commission, will be a twin-screw unit, having the following dimensions:—Length over all, 158-ft.; breadth moulded at main deck, 48-ft.; depth moulded, 13-ft. 1½-in. The vessel will be similar in general lay-out to the vessels "Wallasey" and "Marlowe," having a raked keel, straight stem, twin semi-balanced rudders of Flettner type, one funnel and one mast. Provision will be made for carrying about 2,000 passengers, ample enclosed accommodation being provided in a large deckhouse on the main deck, fitted up with general saloon, smoking saloon, etc. The machinery will consist of two sets of triple expansion engines, steam being supplied by three single-ended cylindrical boilers with a working pressure of 200-lbs., to give a speed of twelve knots on trial.

Morecambe Old Harbour.

Morecambe and Heysham Corporation is seeking powers to borrow £30,750 for the widening and extension of the promenade near the Old Harbour. About £9,750 is the cost of the promenade and sea work which has to be built by the Corporation in connection with the reconstruction of the Old Harbour site before the L.M.S. Railway Co. could proceed with its schemes. At a Ministry of Health enquiry held in the town, the Borough Surveyor (Mr. P. W. Ladmore) said the new sea wall along the West End Promenade from the Old Harbour to the West End Pier was designed to prevent the flooding of certain parts of the town. The promenade would be raised about 18 inches and would be surfaced in concrete along its entire length.

Manchester Ship Canal.

Manchester Ship Canal Company, on account of the decline in traffic receipts, have decided to put 1,000 employees in the dock and head offices on short time, with a corresponding reduction in wages. In every fortnight eleven days only will be worked, and the employee will receive no pay for the day not worked. This system has been adopted as an alternative to dismissals, and is considered necessary in view of the reduction in tonnage handled. The new cut is additional to the 5 per cent. decrease imposed some weeks ago, which conformed with the similar reduction in wages of railway workers. Traffic receipts for the first six months of 1931 show a heavy decline on the same period in 1929 and 1930.

Trafford Bridge, Manchester.

The Manchester Ship Canal Company has expressed to the Salford City Council its concern at the proposal to close Trafford Bridge for the purpose of reconstruction. The bridge is part of one of the main thoroughfares over which port traffic is conveyed. It is not only important for the import and export traffic of the docks, but is also the chief northern outlet for traffic from Trafford Park. The situation would be eased if one-way traffic could be maintained over the present bridge or one alongside. One suggestion is that the Corporation should consider building a temporary bridge, sufficient for loads up to 2 tons 10 cwt., or a total weight, including the wagon, of 3 tons 10 cwt. to 4 tons. Colonel Stevens, of Trafford Park Estates, Ltd., says that his company has two bridges in stock which appeared to be fairly suitable for temporary bridge work and could be lent to the Corporation free of charge.

Woman Harbour Master.

Mrs. Jane Ellen Jones, of Portdinllaen, near Pwllheli, who is the only woman harbour-master in Britain and also the oldest licensee in Wales has just celebrated her ninety-fifth birthday. Mrs. Jones has acted as harbour-master at Portdinllaen for over sixty years.

New Bascule Bridges.

Good progress is being made in the work of preparing the foundations of the new bascule bridges to be erected on the Birkenhead side of the Mersey dock estate. During the excavations at the Egerton Dock the workmen came across an ancient tunnel large enough to accommodate a railway engine. It had been blocked up at either end, but was full of mud and slime. It is believed that it was built to carry water from the East Float into the Egerton Dock, or was part of a great culvert. In order to provide a solid foundation for the bridge the tunnel had to be filled with concrete. The rolling bascule-type bridges will take the place of the hydraulic swing bridges across the series of dock passages between Birkenhead and

Seacombe. Already the huge cogs into which the slots of the moving portion of the bridge fits are in position. This portion of the steel work is exceedingly heavy, and one section alone weighs forty tons.

Liverpool Shipping Exhibition.

Close on 40,000 people visited the Liverpool Shipping Week Exhibition, which was held last month in the St. George's Hall. Mr. Richard D. Holt, chairman of the Mersey Docks and Harbour Board, performed the opening ceremony, and was welcomed by Mr. C. Sydney Jones, who said that since 1858 the Mersey Docks and Harbour Board had guided the destinies of the port in a way which had not only brought admiration from all connected with the city and neighbourhood, but the Board had become a model for all similar Boards which had been created since, especially the Port of London Authority, and still remained perhaps the most distinguished and renowned Board which dealt with a port in the whole world. Ever since the Board was founded a body of gentlemen, chiefly from Liverpool, had met daily and weekly to deal with the affairs of the port, and one thing of the greatest distinction was that all these gentlemen for that long period of years had done that work for no compensation except that of doing their duty to the town and port. That was a record which he thought could not be equalled anywhere else.

Mr. Richard D. Holt declared that the River Mersey and the docks were not a glorified shipping exhibition, but were developed for the purpose of loading and unloading ships. The real trouble that all were facing at present—the real cause of anxiety to the trade of the port—is not the facilities of the port but the terrible falling-off in the exports of manufactured goods. "It is on the export of manufactured goods that the prosperity of Liverpool has been built up," he continued, "and if there are no manufactured goods to go out of Liverpool, it won't make two pennyworth of difference to any of us that we should have the finest docks and ships in the world. A ship is no good without her cargo. The more people get to interest themselves in the work of the port, the more completely will they understand the problems in front of us—problems which at this moment are more in the direction of manufacture than in the direction of the transport of manufactures. We have solved the difficulty of transporting manufactures, but we have not got the manufactures to transport. This is what we want now."

In the exhibition there were large models to illustrate the layout of the Liverpool dock system and the coming and going of famous liners and merchantmen. For example, there was a remarkable miniature replica of the "Alabama," built at Cammell Laird's in 1862, which slipped out of the Mersey by a subterfuge and, arriving at the Azores, played a very conspicuous part in the destruction of shipping belonging to the Federal Government of the United States of America. Many of the secrets of navigation were explained by actual or model apparatus, and in this department special interest was aroused by the Marconi appliances assembled in a wireless cabin. Glasgow contributed over a ton of exhibits from its own splendid collection, and alongside the beautiful models of the finest ships of to-day and yesterday, were seen examples of the primitive cross-river baskets used by the earliest Britishers. Three of the leading shipping companies, the Cunard, White Star, and Canadian Pacific, provided facilities to the public to see "how the wheels go round" in five splendid liners whose names are famous throughout the world.

In the special display by the Mersey Docks and Harbour Board, were series of buoys; boat beacons; Bidston signals; Gladstone Dock model; panorama of Liverpool's docks; explosive whale killer and extra harpoon head; two old lightship log books; Collins chart, 1689; large painting of Dock Estate; speed indicator of "The Royal Charter," which was the forerunner of the modern patent log and one of the earliest ever made (dated about the middle of the 19th century).

Transferred to London.

The organiser of the Shipping and Engineering and Machinery Exhibition, held in Olympia, London, from September 19th to September 26th, invited the Liverpool Organisation to transfer to Olympia the whole of the Liverpool shipping exhibition which was also a feature of the Liverpool Shipping Week. Several exhibits were sent and the Mersey Docks and Harbour Board agreed to loan a model of the entire dock system together with their model of the Gladstone Dock.

Mersey Tunnel Engineering Control.

Mr. B. H. Colquhoun, the resident engineer to the Mersey Tunnel Joint Committee, in a lecture at Liverpool, said the key of the whole tunnel would be the control room at George's Dock, where every part of the tunnel's mechanism was represented on electrical panels. The engineer would be able to

Notes from the North—continued

see at a glance the state of affairs at every point—if the fans and pumps were working accurately, how much carbon-dioxide there was in the air, and so on, and by merely pressing the appropriate button, he could speed up, slow down, or stop any operation requiring adjustment. The movement of the air in the tunnel would be effected by blowing fans, each 50-ft. in diameter, and by exhaust fans. In the middle of the tunnel, he said, there was a pump room, which was set in operation by electrical self-acting mechanism, if the water in the sump below it reached a certain level. By automatic means, also, this central apparatus tried all the other pumps in different parts of the tunnel, and, if necessary, gave the alarm. Every pump was duplicated, one coming into action if its companion failed, and it was to the last degree unlikely that all would ever fail together. The quantity of water seeping through into the tunnel when it was finished would be infinitesimal in comparison to the great volume hourly withdrawn during construction. They had to consider rain pouring into the tunnel at the entrances, and had studied the weather records for many years. Fire alarm buttons were placed throughout the tunnel, and when one of these was pressed by a patrolman it would not only warn the control-room and summon the brigade, but would automatically operate "stop" signals and guide traffic from that part of the tunnel where the out break had occurred. The Tunnel Joint Committee, he said, would discourage pedestrian traffic. The foot-paths were only 2-ft. 6-in. wide, and foot passengers would impede the tunnel staff. The tunnel staff would consist of about 160 persons.

Better Coast Lighting Needed.

Convened to discuss the need of better lighting on the west coast of the Isle of Man, a public meeting of visiting fishermen, held at Peel, adopted the following resolution:—"That this meeting of fishermen and sailors, representing various British seaports, hereby make complaint of the insufficient lighting, and the absence of sound signals on the south-western coast of the Isle of Man, whereby seafaring men are placed in great danger, especially in thick, foggy weather and adverse tides. Vessels making a channel course to and from Belfast, the Clyde, and drifters and trawlers visiting Peel are frequently in peril. We would respectfully remind the authorities that a number of shipwrecks have occurred with the loss of life on this

coast quite recently, and would respectfully ask Government Office to place the matter and the accompanying petition before the proper authorities." All present at the meeting signed a petition, which will be forwarded to Government Office. A complaint was made by several fishermen with regard to several of the town street lamps near Ballaquane and Peveril Terrace, which were often mistaken for the breakwater light, and it was suggested that the matter be brought to the notice of the Peel Commissioners.

North Wales Coast Erosion.

Coast erosion problems engaged attention at the annual conference of the North Wales district of the Institution of Municipal and County Engineers. Members had the opportunity of inspecting the huge sea defence works now in course of construction at Barmouth, where erosion has been a serious problem for many years. Mr. Stanley L. Richards, Cardiff, the sea defence works engineer, said that, although a great storm in 1923 caused considerable damage at Barmouth, there was no doubt that serious erosion had been continually going on at Barmouth for a long time. From an examination of official records recently it was discovered that the high-water mark had moved inland, and that the area of land lost in the Urban Council district was about ten acres. The sea defence works now proceeding are estimated to cost £138,000. Mr. David Edwards, Brighton, said groynes erected on the Barmouth beach had been a success, as they had accumulated a firm sandy beach in several parts. When completed the Barmouth works would be a lasting improvement.

Mersey Sewage Problem.

Several of the Merseyside borough councils have agreed to associate themselves with the proposed investigation by the Department of Scientific and Industrial Research of the effects of the discharge of crude sewage into the River Mersey.

Ribble Railplane.

Proposals have been made for erecting a railplane bridge across the River Ribble, but the Blackpool Corporation, although giving the project their moral support, as they have done previously, decline to take any financial interest. It is estimated that the bridge would cost 1½ million pounds. One of the suggestions put to Blackpool was that the Corporation should



The Port of Liverpool. Alexandra Dock and Grain Silos.

Notes from the North—continued

pay the interest on half a million pounds for three years, by which time it was hoped the bridge would be earning revenue.

Consulting Engineer to Report on Flooding Trouble.

Rimrose Brook, Bootle, which discharges, together with a great amount of sewage, into the River Mersey through an outfall which runs under the Gladstone Dock, has recently been responsible for a considerable amount of flooding due to the development of the area. The brook and sewers which share the brook's outfall have become inadequate. The Lancashire County Council, the Urban and Rural District Councils concerned, and the Borough of Bootle, consider that the drainage of this rapidly developing area is a matter which requires attention at a very early date, and should be dealt with by the local authorities in collaboration, and with that object they have, at the joint expense, appointed Mr. Godfrey Taylor, engineer, of Westminster, to prepare a report and advise them as to what works should be carried out.

A Pioneer Dock Lamp.

In the Faraday Centenary Exhibition held in the Picton Hall, Liverpool, last month, the Mersey Dock Board showed an old gramme motor and an arc lamp of the type formerly used to illuminate the docks.

Obituary.

Captain E. Taylor, assistant harbour master at Fleetwood, died recently at Fleetwood. He was appointed assistant harbour master in 1915, and was master and mate on the tug boat at Fleetwood.

Contracts Placed.

The Mersey Docks and Harbour Board has accepted the following tenders:—Electric cable, British Insulated Cables, Ltd.; motor-generators sets, etc., British Thomson-Houston Co., Ltd.; steel sheet piles, etc., Thomas James and Co.; pig iron, The Stanton Ironworks Co., Ltd.; bolts, nuts, etc., G. H. Smith and Co.; cast steel files, Sheffield Steel Products, Ltd.; graving dock blocks, John Varley, Ltd.

The Port of New York

Latest Data issued by the Bureau of Commerce

Value of Foreign Trade at the Port of New York.

THE value of foreign trade at the Port of New York during the month of June, 1931, amounted to \$161,217,000, a decline of 28 per cent. as compared with the same period last year when the foreign trade amounted to \$224,620,000. The decline for the United States as a whole for the same period was 34 per cent. The foreign trade at the Port of New York during June equalled 45 per cent. of the total of all ports in the country.

Exports were \$74,235,000, as against \$105,065,000 in June, 1930, a decline of 29 per cent., and imports were \$86,982,000 compared with \$119,555,000 a year ago, a decline of 27 per cent.

	1931 \$	June 1930 \$	Net Change Amount \$	Per Cent.
Exports	74,235,000	105,065,000	-30,830,000	-29.3
Imports	86,982,000	119,555,000	-32,573,000	-27.2
Exports and Imports ...	161,217,000	224,620,000	-63,403,000	-28.2

Grain Exports.

Combined exports of domestic and Canadian grain during the month of June, 1931, were about equal to the same period last year.

	1931 (bushels)	June 1930 (bushels)	Net Change Amount	Per Cent.
Through the Port of New York—				
Domestic and Canadian Grain	5,697,000	5,702,000	-5,000	-0.1
Domestic Grain	567,000	213,000	+354,000	+166.2
Canadian Grain	5,130,000	5,489,000	-359,000	-6.5

New York as a Transshipment Port.

Standing at the cross roads of transportation the Port of New York attracts not only import and export traffic but also an important volume of traffic between foreign countries which is trans-shipped between steamship lines for which the port is a common terminal. For example, goods may be shipped from the West Indies to Europe more quickly via the Port of New York than via any direct sailings because of the frequency of service in and out of New York, which is justified by the large volume of commerce. Similarly, freight is frequently shipped from South America, or from the Orient, to New York and then trans-shipped to European steamers.

The total value of merchandise shipped from one foreign country to another via United States ports in 1930 is reported by the Department of Commerce at \$31,622,000, of which \$26,111,000, or approximately 83 per cent., moved via New York.

A tabulation showing trans-shipments for the year 1930 at the six leading United States ports is as follows:

	\$
All United States Coast Ports	31,622,326
New York	26,110,988
San Francisco	1,540,718
New Orleans	1,083,424
Boston	856,095
Baltimore	298,329
Philadelphia	208,692

The trans-shipment trade at the Port of New York is facilitated by the numerous arrangements for through billing of freight via New York, under which two participating steamship lines, both terminating at New York, agree to maintain a rate substantially the same as the direct rate maintained by the less frequent steamship service operating directly between the two foreign countries.

Commerce at Port Newark.

Receipts of lumber by vessel at Port Newark during the month of July, 1931, amounted to 12,671,000 board feet as compared with 12,427,000 board feet during the same period last year, an increase of 2 per cent.

Inland shipments of lumber from Port Newark totalled 23,260,000 board feet, of which 7,314,000 board feet moved by railroad and 15,946,000 board feet by truck.

Receipts by vessel of cargo other than lumber amounted to 44,867 tons as compared with 2,740 tons in July, 1930.

Eighteen steamers arrived at Port Newark during the month as compared with 21 a year ago.

Record Loading of Unboxed Automobiles.

The shipping of automobiles unboxed is becoming more general. This method of handling does away with the necessity of taking the automobile apart after it has once been assembled and tested, and then assembling it again at the point of destination.

A hurry order from Holland for 100 automobiles was recently received at the Ford plant at Edgewater, and the s.s. "Tomalva," of the American Diamond Line, tied up at the assembly plant to load them. As soon as the hatches on the steamer were opened, a line of automobiles began to move toward the ship on a conveyor, and in 2 hours 50 minutes the hatches were closed after the last car was safely stowed.

Fast Delivery to New York Stores.

Record speed in delivery of goods from Germany was established by a local importer of this city, when 89 cases of gloves which left Chemnitz on June 20th were placed on the counters of New York stores on the 29th, just 9 days later.

This shipment arrived via the s.s. "Bremen," of the North German Lloyd, one of the several express liners serving the Port of New York exclusively. Importers, exporters, manufacturers and merchants throughout the country appreciate the value of the many fast vessels that arrive and sail from this port every week with unfailing regularity.

New York—An Oil Port.

Starting from Constable Hook on the Jersey side of the harbour and continuing south through the Kill van Kull and Arthur Kill to Perth Amboy, is concentrated a number of huge refineries and tank farms devoted to the refining and distribution of petroleum and its numerous products.

A recent survey indicates that over 20 different oil companies have plants or facilities in that district and that upwards of 63 piers and side wharves are devoted to this industry.

It is further estimated that over 1,700 tankers brought in 7,600,000 tons or in excess of 100,000,000 barrels of crude and

The Port of New York—continued

refined oil to these plants during the year 1930. This volume exceeds the total import and export tonnage handled at any other United States port during the same period.

Vessel Movements in Foreign Trade.

While the number of entrances and clearances of vessels in foreign trade at the Port of New York are less than they were a year ago, there has been a marked improvement in activity during the last few months, notwithstanding the fact that several of the leading transatlantic lines have curtailed their sailing schedules.

		July, 1931	July, 1930
Entrances	No. of Vessels	538	576
Clearances	Tonnage	2,626,814	2,717,787
		563	616
	Tonnage	2,754,107	2,815,333

Steamship Passenger Traffic.

A lower scale of fares is now in effect between the Port of New York and Europe covering first and third class rates. First class accommodations have been cut by \$15 to \$57.50, depending on the vessel, and third class berths are now \$12 to \$20 cheaper than heretofore.

It is hoped that these reductions will stimulate overseas passenger travel and create a greater desire for sea travel on the part of the many thousands who have yet to experience this pleasure.

A comparison of the number of passengers carried across the Atlantic via the Port of New York in 1930 and 1929 indicates a drop of 23,200 under the previous year, or 2.5 per cent. While the first, cabin and second classes fell off in both directions, as well as westbound third class (due to immigration restrictions), the tourist third class increased noticeably and justifies the effort put forth by the various lines to popularise this class among travellers of limited means. There is a growing tendency for many lines to confine their services to the two classes—cabin and tourist.

	Year 1930		Year 1929	
	Passengers	Per Cent.	Passengers	Per Cent.
EASTBOUND—				
First Class ...	80,200	18.4	97,600	23.7
Cabin ...	55,400	12.7	55,500	13.5
Second Class ...	52,300	12.0	55,900	13.6
Tourist Third ...	96,800	22.2	77,300	18.8
Third Class ...	150,600	34.7	125,100	30.4
Total ...	435,300	100.0	411,400	100.0
WESTBOUND—				
First Class ...	79,000	16.5	91,600	17.9
Cabin ...	56,600	11.8	62,500	11.9
Second Class ...	71,300	14.8	87,400	16.6
Tourist Third ...	103,600	21.6	82,200	15.6
Third Class ...	169,500	35.3	200,400	38.0
Total ...	480,000	100.0	527,100	100.0
Total—Both Directions	915,300		938,500	

The number of United States citizens and aliens travelling abroad by steamship via the Port of New York registered an increase in June over May, although considerably under the totals for last year. One of the pleasing phases of this traffic is the increasing percentage of citizens that now go abroad, whereas in former years they comprised only a small proportion of sea travellers.

		June 1931	June 1930
		1931	1930
INBOUND—			
Aliens—Immigrant ...	...	2,168	9,729
Non-Immigrant ...	...	8,035	9,823
U.S. Citizens ...	...	17,959	21,313
Total ...	...	28,162	40,865
OUTBOUND—			
Aliens—Emigrant ...	...	2,485	2,676
Non-Emigrant ...	...	12,014	13,796
U.S. Citizens ...	...	21,118	27,717
Total ...	...	35,617	44,189
Total—Inbound and Outbound	...	63,779	85,054
Total for 6 months	...	336,449	432,589

Coastal Steamship Passenger Traffic.

The number of passengers travelling over the Intercoastal, Coastal, Long Island Sound and River routes, for the first six months, exclusive of one-day excursionists, is about 10 per cent. under the first half of last year. Up to the end of June a total of 361,186 passengers were carried over these domestic routes, whereas 405,461 were carried during the first six months of 1930:—

	January to July 1931	January to July 1930
Intercoastal ...	2,357	13,014
Coastal ...	289,043	347,269
River ...	62,786	45,178
Total Domestic	361,186	405,461

Steamship Sailings.

Although the total of all vessels sailing during July from the Port of New York is 126 less than sailed in the same month in 1930, it is 63 more than the total June sailings, which indicates quite an improvement. Direct sailings scheduled to the United Kingdom, Rotterdam-Antwerp, Italy-Mediterranean, South America and China-Japanese ports have all been cut 20-30 per cent. since July, 1930. Intercoastal and other domestic sailings are also under last year's figures for these services.

The biggest sailing day of the month was Saturday, July 11th, when 80 vessels left the harbour. Of these, 36 departed for foreign ports, including 6 to the United Kingdom, 6 to North European ports, 9 to Caribbean-Mexican ports, 3 to South America, 1 cruise and 2 tankers. Domestic sailings totalled 44 and included 3 to the Pacific Coast, 9 to South Atlantic and Gulf ports, 4 tankers and 3 coal carriers.

New York State Barge Canal.

The total tonnage that has been moved via the State Canal from the opening of navigation up to August 15th fell off slightly from the volume handled in the same period last year. This year the total volume moved is 1,902,606 tons, whereas last year it was 1,936,849 tons. Petroleum and its products continues to gain and registers a total of 435,149 tons against 396,507 tons during the same period last season. Iron and steel articles are also ahead with 102,397 tons this year against 71,252 tons moved up to August 16th last season.

Due to the small demand for export wheat there has been a slowing up in the movement of this commodity to seaboard. So far this season 584,756 tons of wheat have come down the canal to the Port of New York, whereas 589,600 tons were carried during the same period of 1930. However, this small loss was more than made up by the increased volume of other grains moved this year. Corn, oats, rye and barley show a total of 83,348 tons this season against 7,428 tons carried the previous year.

A most encouraging sign is the increasing number of new commodities that are being shipped via the Barge Canal, not merely between this city and Buffalo, but from Boston, Philadelphia, Camden and other Atlantic coast ports to Cleveland, Detroit, Chicago, Milwaukee and Duluth. It seems as though traffic managers have at last awakened to the importance of the canal route as an economical method of transporting freight. Only this month one of the canal motor-ships brought through a cargo of 1,400 tons of canned milk from Milwaukee, which it delivered at the U.S. Naval Base, Hampton Roads.

The new Ford motor-ship "Edgewater" recently arrived on its maiden trip from River Rouge, Michigan, with 2,100 tons of automobile parts, which were delivered direct to the waterside assembly plant at Edgewater, N.J. Although automobiles and parts have been routed via the canal on previous occasions, this constitutes the largest single shipment of this commodity ever to come this way.

A Wisconsin plumbing supply house ventured a test shipment of plumbing fixtures early this season, routing 20 carloads to New York City from its Wisconsin plant via the Great Lakes and Barge Canal. The motor-ship carrying the shipment made excellent time and delivery was made at their Long Island City warehouse in 7 days 6 hours.

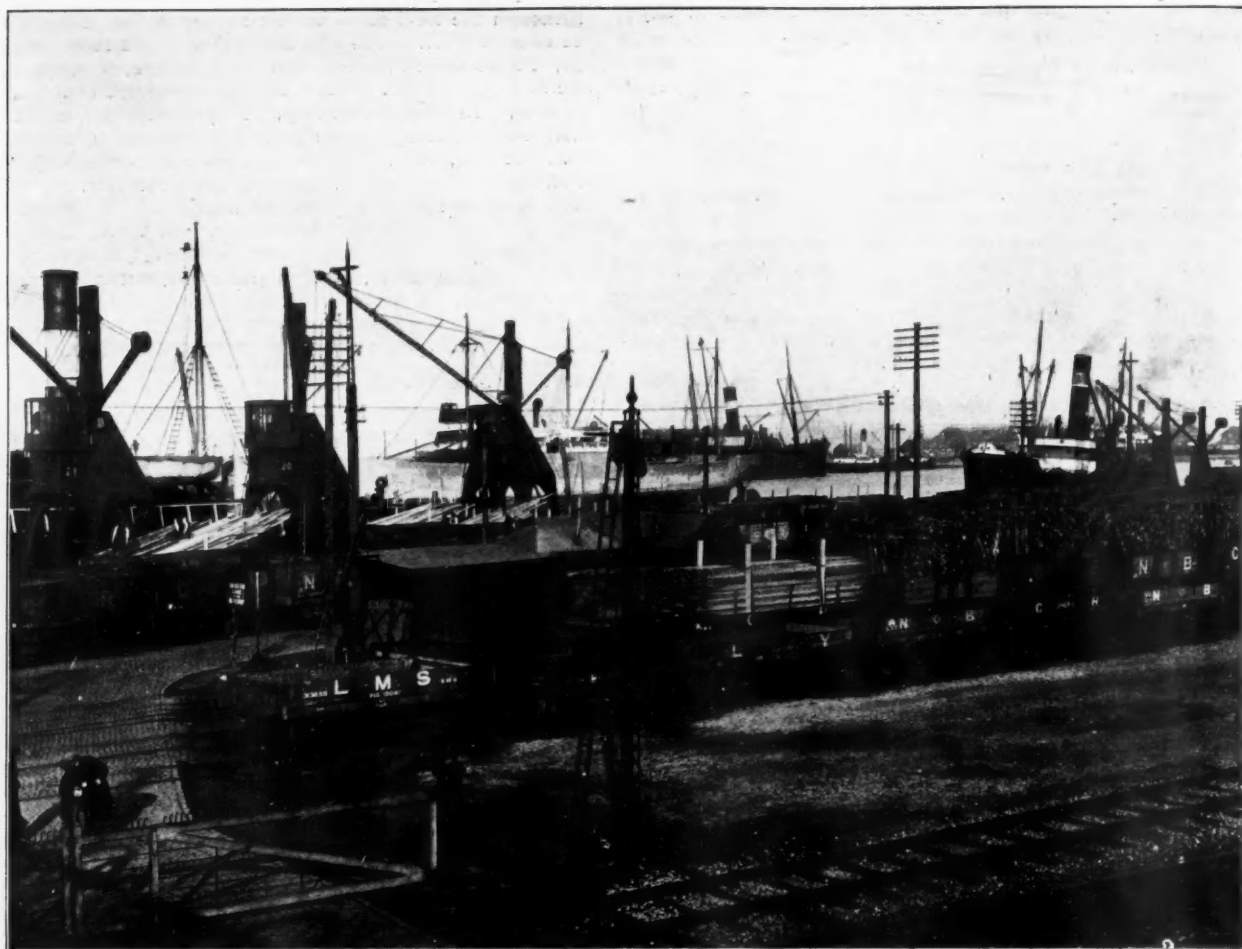
Kiel Canal Traffic in August

There was a decline of 2.82 per cent. in the number of vessels and of 6.24 per cent. in the tonnage passing through the canal in August compared with July. Compared with the corresponding month of 1930 there was a decline of 595 vessels and 383,044 net register tons. The figures are as follows:—

	No. of Vessels	Net Reg. Tons
August, 1931	4,852	1,787,024
July, 1931	4,993	1,905,997
August, 1930	5,445	2,170,068

Of the 4,852 vessels using the canal in August, 2,062 were registered sea-going vessels with an aggregate of 1,586,983 net registered tons, comprising 1,962 freight and passenger vessels aggregating 1,586,983 net registered tons; 98 steam tugs aggregating 2,758 net registered tons; 2 fishing steamers aggregating 300 net registered tons. Of the remainder 2,464 were sailing vessels of 130,608 net registered tons, 99 lighters and barges of 34,948 net registered tons, and 277 pleasure and government vessels of 34,485 net registered tons. Loaded vessels represented 74.49 per cent. of the total tonnage capacity. The vessels were loaded as follows: 43 with passengers, 14 with cattle, 216 with coal, 57 with stone, 54 with iron, 388 with timber, 908 with grain, 21 with ore, 660 with other bulk goods, 968 with general cargo, 94 with miscellaneous cargo, 1,429 (29 per cent.) empty or in ballast.

Scottish Harbour Notes



A View of the London, Midland and Scottish Railway Company's Docks at Grangemouth.

Big Decrease in Clyde Navigation Trust Revenue.

A REFLECTION of the world-wide trade depression was shown in the statement for the year ending June last as presented at a recently-held meeting of the Clyde Navigation Trustees. This statement indicated that there had been a decrease of £147,308 in the revenue of the Trust for the period under review, and—commenting upon this fact—Mr. W. F. Robertson observed that the Port of Glasgow was suffering in common with other ports on the change of circumstances this year. He could not predict when an improvement would come, but he felt justified in observing that the Clyde Trustees would be ready to play their part in the future as in the past. Some other interesting points emerged from the same report, and general satisfaction was expressed at its terms considering the adverse circumstances of the times.

New Coal Transporters to be Installed at Grangemouth.

It has been decided by the London, Midland and Scottish Railway Company to instal up-to-date coal transporters at Grangemouth Docks to replace the old coal hoists, and it is felt that these will prove of great benefit to the port. In addition to the transporters the company are to construct a new oil jetty in the eastern channel. This is to be done with the dual object of giving more accommodation for general traffic in Grange Dock and separating the oil-discharging vessels from those dealing with general cargo. These will then be cut off from other vessels by the Caisson Bridge, so that should fire occur there is no danger to general cargo steamers; and (even should it be necessary to run the water out of the channel where oil boats are dealt with) the Caisson Bridge will keep the water in the other dock intact.

Graving Dock Entrance to be Reconstructed at Greenock.

Within the next few weeks a commencement will be made with the scheme to reconstruct the existing obsolete entrance to the Garvel Graving Dock at Greenock. Subject to certain details to be approved by their consulting engineer (Mr. N. G. Gedye, of London), Greenock Harbour Trust accepted the tender of Messrs. Melville, Dundas and Whitson (Glasgow) to carry out the work at an estimated expenditure of £27,000, and an Exchequer grant is being given towards the cost of the improvement. The work of reconstruction is expected to

take from twelve to fifteen months, and when it is completed the dock will be leased by the Harbour Trust to the Greenock Dockyard Company, Limited, for a period of fifteen years. As a result of the alterations to the entrance the dock will be available for use to its utmost capacity by large vessels of modern design, and in the hands of the Greenock Dockyard Company it promises to become a busy ship repair centre.

Montrose Harbour Board Meeting and Rates of Charges.

At a recently-held meeting of Montrose Harbour Board it was recommended by the Harbour Committee that the present rates for the current year—namely, the schedule rate plus fifty per cent.—should be continued. Councillor Piggins (Convener of the Harbour Committee)—in moving approval of this recommendation—said he thought it would be well to continue the present scale. The revenue from the harbour was not so much as they would have liked (he added) but they hoped that they would not have to face anything like the expenses that they had last year. They had been able to pay interest to their bondholders and provide their payment to the sinking fund, and, but for the fact that they had to pay over £500 for the removal of the wreck of the "Cruden," they would have been in quite a satisfactory position. Last year they came in for their full share of the general wave of industrial depression, but on the previous four years' workings they managed to get through financially. The recommendation was approved.

Inverness Harbour Dredging Scheme.

When the improvements and extensions to Inverness Harbour—which are now in progress—are completed, at a cost of about £24,000, it is hoped that more and larger cargo vessels will be attracted to this port. At a recently-held meeting of the local Harbour Trustees it was reported that two tenders had been received in connection with the dredging at the harbour. The Jarrow Dredging Company (who submitted the lowest offer which was not contingent upon the scheme of dredging at Invergordon) offered to do the work for £3,441 and the additional dredging of the river bed below the railway bridge for £366. Their letter stated that, in the event of their being successful in obtaining the Invergordon work, the tender would be reduced by £450; but the engineer (Mr. Alex. Grant, C.E.) stated he understood that the Invergordon scheme had been held up and might not now be proceeded with. A member

Scottish Harbour Notes—continued

suggested that they might as well do the extra dredging if it had to be done some time, and Captain Donald Munro (Harbour-master) said that they would never make a proper harbour until that part of the river was widened. Too much silt was coming down the river (the Harbour-master added) but the wider the channel was made the less silting would occur. It was ultimately agreed to proceed with the full dredging scheme.

An Important Contract.

Messrs. Sir Robert McAlpine and Sons (Clydebank) have secured the contract for the construction of the new graving dock at Elderslie, Scotstoun, Glasgow, from Messrs. Barclay, Curle and Company. This contract covers a period of over two years, and several hundred men will be engaged on the work. Work is about to be commenced on the graving dock.

Proposed Scheme at Stornoway Harbour.

With a number of important Government officials on board, the fishery cruiser "Minna" recently arrived at Stornoway when the party was conducted round the new harbour works by Mr. Norman McIver (Chairman of the Stornoway Harbour Board) accompanied by the harbour-master and resident engineer, and had explained to them the proposed work under the second instalment of the improvement scheme. It was pointed out that Stornoway Harbour had never received a penny of grant from any Government department, and that the first instalment of the present work now nearing completion at a cost of £38,000 was financed from surplus revenue to the extent of £12,000; the balance being obtained on loan from the Public Works Loan Board. It may be added that at a recently-held meeting of the Local Harbour Board it was officially reported that the memorial making application for a grant of £46,500 to meet the cost of the works comprising the second instalment of the Scheme A (as per the consulting engineer's report) had duly been forwarded to the Lords Commissioners of His Majesty's Treasury.

Widening of River Clyde.

Negotiations which have for some time been progressing in connection with the widening and re-opening of the channel of the River Clyde in preparation for the launching of the new Cunard liner—at present under construction at the yard of Messrs. John Brown and Company, Limited, Clydebank—were under review at a recently-held meeting of the Clyde Lighthouse Trustees when it was reported that arrangements with the Greenock Harbour Trust had now been satisfactorily concluded. It was reported that various meetings between committees representative of the Clyde Lighthouse Trustees and the

Greenock Harbour Board had failed to produce an amicable agreement, but finally there had been received a draft minute agreement embodying the consent of the Greenock Harbour Trustees to the request of the Clyde Lighthouse Trustees to execute the necessary works on the channel to enable the new Cunarder to be taken down the river. Commenting upon this position, the Chairman said it was pleasing that the difficulties had been overcome and the agreement was ready for signature. They had feared that they might require to apply for a provisional order—which would have been very costly for both parties—but this had now been obviated.

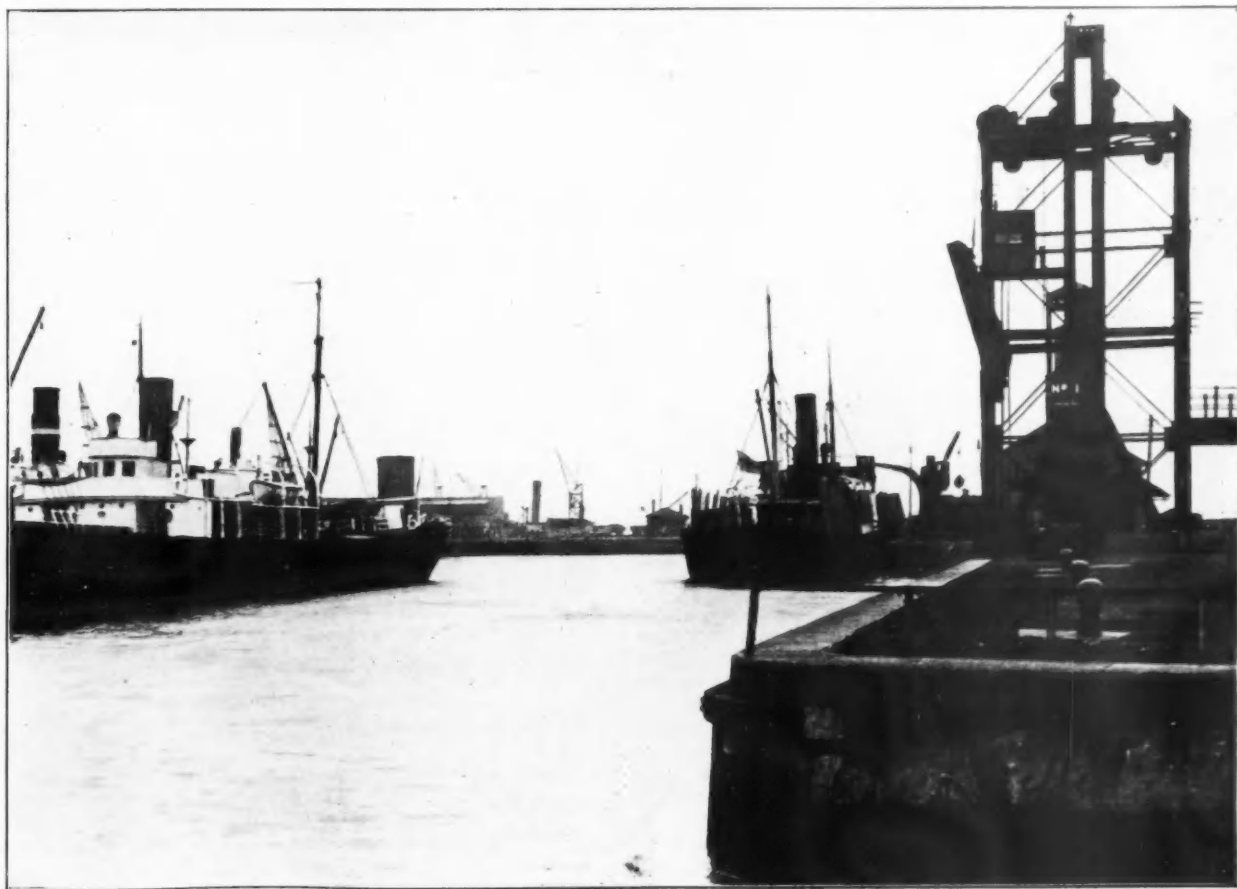
Another Large Bridge at Vancouver

A concern known as the Fraser River Bridge Company seeks authority for the construction immediately west of Port Mann of a combined railway and vehicular traffic bridge across the Fraser River. A double-deck steel structure is proposed, the cost being estimated at £550,000, and the Company would recoup itself by charging tolls for a period at the expiration of which the bridge would become public property.

The structure would have a span of 1,000-ft. across deep water, together with the necessary approaches on each side. The site selected is at the upper limit of navigation for deep sea ships on the river. The bridge would be opposite the north end of Johnston Road communicating with the Pacific Highway on the south and with the Lougheed Highway on the north. The distance from the International boundary to Vancouver by the new route would be 33 miles, approximately the same as by the existing bridge at New Westminster, about 4 miles downstream.

The plans call for three lanes of vehicular traffic on the upper deck, and it is suggested by the promoters that the lower deck should be utilised by the Canadian National Railways to provide a permanent entry into Vancouver for their trains. The new route would shorten the line of the Canadian National Railways into Vancouver by some 4 miles, and enable the railway to use its heaviest locomotives, now unable to cross the river by the New Westminster bridge.

Traffic into Vancouver, particularly from American points, has increased to such an extent in recent years that another crossing of the Lower Fraser River seems imperative. The building of the proposed span, it is believed, would effectively solve this problem for some years to come. The bridge company officially states that it has given up the project for a bridge at Ladner, directly south of Vancouver, in favour of the proposed Port Mann structure.



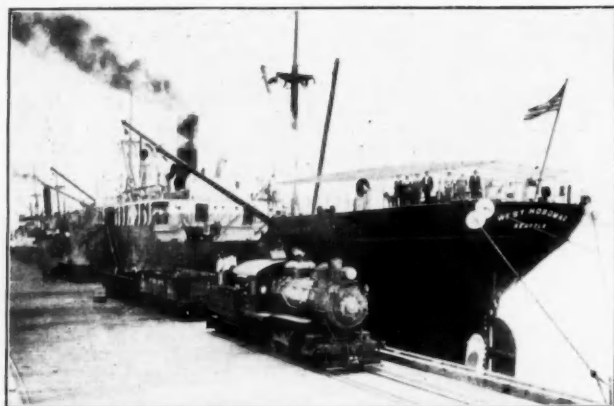
The London and North Eastern Railway Company's Bo'ness Dock.

The Port of New Orleans.

By Clem G. Hearsey.

IT might be said that Bienville himself and his immediate successors in the government of New Orleans, capital of the French territory of Louisiana, instituted the wharf system, which has developed to-day into one of the greatest in the world.

Just before the last quarter of the eighteenth century, when the territory was turned over to the Spaniards, a line of levees extended from what is now Canal Street, the upper limits of the city to the lower limits known as the Esplanade.



Unloading Aluminium Ore at Stuyvesant Docks.

This scene showing shipside-railroad facilities tells an effective story of the close co-ordination between rail and water carriers which has made New Orleans the Port it is to-day.

Photo by Franck.

Several wharves were built out over the battures, one at the Custom House, for French Royal ships, and another in front of the Place d'Armes, for the King's ships. And then there was the Slaughter House Wharf, or landing, one of the largest on the waterfront, where cattle destined for the butchers' mauls and knives were put on shore from scows.

New Orleans for many decades was a closed port, open only to the French companies having a royal grant, and the same rule obtained when the Spaniards took charge—it was a monopoly for Spanish trade. But later some concessions were allowed the French, and after the revolutionary war the Americans were given limited privileges to trade from their flat boats at the city wharves.

After Napoleon ceded the territory of Louisiana to the United States for a small money consideration, and the Americans established government in New Orleans, progress was in order and every activity was directed toward developing the port and increasing its importance and commercial greatness.

The city soon became the gateway to one of the richest sections of North America, and the levees were extended and new wharves built to accommodate the ships of the world. New Orleans through succeeding generations always maintained its place among the ports of the world.

New Orleans to-day is located on both sides of the Mississippi River, and for busy, crowded miles of docks, warehouses and modern harbour structure its development extends all along the city front and well beyond the corporate limits. The port has more than 52 miles of waterfront, all improved and readily adaptable to the usages of trade and commerce. Of this frontage, 41.4 miles are on the Mississippi River and 11 miles on the Inner Harbor-Navigation Canal, which connects the Mississippi River with Lake Pontchartrain, through a modern and expensive system of locks.

There are seven-and-a-half miles of facilities on the waterfront, consisting of docks, steel sheds and warehouses, freight conveyors, ship-side railroad service and every modern convenience, valued at more than 100,000,000 dollars.

These facilities include the largest waterside cotton warehouse in the world, with cotton compresses and storage capacity for more than 900,000 bales, and the latest in handling and loading devices; public and bonded warehouses for cold and dry storage, with 2,000,000-ft. of storage space; export grain elevators with capacity for storage of 5,000,000 bushels of grain; heavy lift derricks, bulk handling machinery, oil handling plants, with liquid storage for 44,000,000 gallons; an improved and complete plant for handling coal and minerals, and many other devices that are found in no other place in the world.

The principal facilities are owned by the State of Louisiana, and there is only a very limited space held under lease by private corporations. The public property is administered by the Board of Commissioners of the Port of New Orleans, made up of prominent business men of recognised ability and high standing in the community.

This commission is now composed of W. L. Richeson, one of the leading grain dealers and exporters of the South, president; Rene A. Stiegler, district manager of the Luckenbach Gulf S.S. Company, one of the important American coast to coast lines, and a leader in the N. O. Steamship Agents' Association, vice-president; I. B. Rennyson, one of the foremost real estate men of the South, secretary; and Seymour Weiss, manager of the Roosevelt Hotel, internationally known through his connection with one of the largest hotel chains in America, treasurer.

John McKay, who for years has been an outstanding figure in transportation circles through his affiliation with great railroad trunk lines, is general manager; Carl Giessow, a recognised authority on rate matters in the United States, is executive general agent; and Tiley S. McChesney, who has been identified with the port development in an executive capacity for many years, is assistant secretary.

His Excellency Huey P. Long, Governor of the State of Louisiana, under whose jurisdiction the Commission functions, has mapped out a most extensive programme of development for the port of New Orleans.

Governor Long's plan, carried out, will materially add to the attractiveness of the port to the commerce of the world, and the already splendid facilities are to be added to, and further sections of the waterfront developed and the wharf and shed limits extended.

One of the Governor's early plans is to bridge the Mississippi River just above the city, within the port limits. This bridge will be for railroad and all vehicular traffic, and the United States Government has already given authority for the work.

The present Port Commission, with the close co-operation of Governor Long, has accomplished great improvements in recent months and much new work is under way in the port.

Three great wharves are now in process of construction—the Bienville Street Wharf, an old wharf that is being entirely rebuilt, and the Mandeville Street and Charbonnet Street Wharves, which were destroyed by fire. These three structures are nearing completion.

The major developments from 1926 to 1930 were as follows:—

The Galvez Street Wharf and Shed, on the Inner Harbor-Navigation Canal, started February, 1924, completed August, 1926. Fireproof construction, 2,400-ft. long.



Federal Barge Tow.

These tows often contain as many as 17 barges, holding 400 carloads, 10 trainloads of merchandise. They leave New Orleans for St. Louis and the upper river every 5 days and in 1928 carried close to 2,000,000 tons of merchandise on the Mississippi between New Orleans and St. Louis.

Photo by Charles L. Franck.

Canal Street Ferry Landing, started October, 1924, completed January, 1926. This is a concrete and steel structure located at the foot of Canal Street, and is used by the Algiers Public Service, operators of the Canal Street ferries.

Poland Street Wharf and Shed, Unit No. 2, started September, 1925, completed February, 1929. This is an extension of 460-ft. at the upstream end of the first unit of 400-ft. This is also a fireproof wharf.

The Port of New Orleans—continued

Julia Street Wharf and Shed Extension, started October, 1924, completed August, 1926. This is a 365-ft. extension at the upstream end of the original Julia Street Wharf. It is of concrete and steel construction, fireproof.

Erato Street Wharf Reconstruction, started October, 1924, completed April, 1927. This wharf was entirely reconstructed with a concrete deck. It is 993-ft. long and is used by the United Fruit Company as a fruit terminal. It is equipped with mechanical unloaders and conveyors for the handling of bananas.

Stuyvesant Docks Marine Leg Grain Unloader, started August, 1925, completed November, 1928. This is a grain unloading facility for use in connection with the operation of the Illinois Central Grain Elevator, leased to the Board of Port Commissioners.

Louisa Street Wharf and Shed Reconstruction, started October, 1925, completed September, 1926. The old Louisa Street Wharf, 822-ft. long, was reconstructed with creosoted timber, and a concrete deck on the river apron only.

Piety Street Wharf Reconstruction, started October, 1925, completed September, 1926. The Piety Street Wharf, 523-ft. long, was reconstructed with a concrete deck on front and rear aprons, and a steel shed was built over it.

Canal Street Wharf. Started November, 1925, completed June, 1928. This wharf at the foot of Canal Street was rebuilt with a concrete deck on creosoted timber substructure. The river edge of this wharf is embellished on account of its being a part of the beautification scheme of the central waterfront. It is 465-ft. long and has a broad stairway and terraced platforms on the side, ascending from the low water stage. It is of striking appearance and was done in Venetian waterside style.

Hinds Lane Wharf, Algiers, started June, 1925, completed August, 1926. This is a wharf construction of creosoted timber for use of the Todd Dry Dock and Shipbuilding Company. It is 1,500-ft. long and is located between the Algiers Naval Station and the U.S. Immigration Station on the west bank of the river.

Poydras Street Wharf and Shed, started August, 1926, completed October, 1928. This is a fireproof wharf and shed located on the sites of the old Poydras Wharf and the old Girod Street Wharf, destroyed by fire. The wharf is 1,370-ft. long and the shed or warehouse is two-storey for a length of 840-ft. at the down stream end of the wharf. At this wharf coffee ships from South America land, and the warehouse and shed are generally filled with sacks of coffee for transshipment all over the United States.

St. Andrew Street Wharf and Shed Reconstruction, started June, 1928, completed September, 1929. This wharf was entirely reconstructed with a concrete deck on a creosoted timber substructure. It is 1,598-ft. long.

Davidson-Pick Wharf, Gretna, started November, 1928, completed August, 1929. This is a creosoted timber wharf construction in front of Davidson-Pick Fertiliser Company plant. It is 100-ft. long.

Press Street Wharf and Shed, started August, 1929, completed August, 1930. This is a creosoted timber wharf with a concrete deck. It is constructed as a small craft landing. This wharf is 930-ft. long.



The Anchorage.

The 52 miles of deep water frontage of the New Orleans harbour makes it rarely necessary for ships to await assignments to berths. This view, however, shows an unusually large number in the anchorage.

Photo by Harvey.

The Mandeville Street Wharf and Shed being built to replace the wharf and shed destroyed by fire will be of steel and concrete fireproof structure. The new wharf will be 1,100-ft. long when completed. Work was started on this project in July, 1930.

The Charbonnet Wharf and Shed, started July, 1930, will be of treated timber and concrete. The wharf will be 600-ft. long.

Work was started on the Bienville Wharf and Shed in July, 1930. The old wharf is now being dismantled, and it will be

replaced by a modern fireproof structure of concrete and steel, with improved shed and warehouse for freight. This facility is being constructed for the use of the Southern Pacific S.S. Lines. The wharf, when completed, will be 1,210-ft. long.

All the wharves in the port of New Orleans are served by the Public Belt Railroad, making the movement of freight easy and expeditious. On the fruit wharves are lines of the most modern conveyors for the movement of bananas, and the port is known as one of the chief tropical fruit ports of the world.



Navigation Canal and Goethals Lock.

Transferring a ship from the Navigation Canal to Mississippi River; or from river level to sea level, it sometimes means a drop within a few minutes of 15 feet; built by General Goethals immediately after he had finished the Panama Canal and called by him his greatest achievement since the Panama Canal; this lock has 75 per cent. of the capacity of any of the Panama Canal Locks.

The Commission has in constant use the "Deluge," the largest and most complete fire boat in any harbour in America. The "Deluge" is of great power, and in emergency can bring into play 32 streams of heavy volume. This boat is used exclusively for fire fighting purposes, and has an auxiliary, the tug "Samson," which also at times serves for towing.

The Commission's handsome yacht, the "Hugh McCloskey," named after one of the early presidents of the Board, is used only for harbour inspection trips. The Commission also has in use a fleet of small motor boats for police work, and to guard against fires under the docks.

For the calendar year 1928, New Orleans port movements represented more than 16,000,000 tons of freight; 10,000,000 tons of foreign freight, 2,900,000 tons of coastwise freight, and 3,300,000 tons of other freight.

The city is served by nine trunk line railroads, with more than 50,000 miles of track, and serving 34 States. Supplementing these arteries of trade there are 13,000 miles of rivers and canals as means to ready movement of commerce. Upon these streams are operated barge lines, steamboats and other economical modes of water transportation, carrying at low cost millions of tons of freight.

Ninety steamship lines maintain regular service between New Orleans and countries of the two hemispheres, and the city has high-class and frequent service on regular schedule to the principal cities of the world, equalled only by sailings from the port of New York. The service out of New Orleans to the Tropical Americas, with their 110,000,000 of population is superior to any other port.

New Orleans is 110 miles from the Gulf, and there is deep water all the way up the river for several hundred miles above the city.

Ever since New Orleans became a thriving city, dating back to the days of early American domination, British tonnage has exceeded the tonnage of every other foreign nation to the port, and for years splendid lines of English ships have maintained regular service from the Southern metropolis to points in the United Kingdom.

New Orleans is the financial centre of the South, with unlimited banking facilities available for financing commerce. It has a population, including that of the territory under the jurisdiction of the Board of Port Commissioners, of more than five hundred thousand, and is the largest and most important city in the Southern United States.

Notes from Far Eastern Ports



Karachi: View shows West Wharves equipped with Two-ton Babcock & Wilcox, and Stothert & Pitt Electric Cranes.

Ceylon

Savings in the Port of Colombo.

THE year 1930 has been one of general trade depression in Ceylon in common with the greater part of the world, writes the Chairman of the Colombo Port Commission in his Report for 1930. This depression is reflected in a decrease of 11 per cent. as compared with 1929, in the total tonnage of cargo, both imports and exports, handled in the port of Colombo, and has caused a fall in the gross revenue recovered in port charges and rents of 1.9 per cent. as compared with the previous year.

The port is financed from general revenue, and considerations of the general financial position of the Island, apart from the financial position of the port itself, led to a reduction of the funds voted for expenditure upon the port from Rs.4,605,805 in 1928-29 to Rs.3,896,580 in 1929-30.

The working of the port for the financial year 1929-30 resulted in an excess of revenue recovered over actual expenditure upon the port of Rs.3,118,321. After deducting capital expenditure, interest, and sinking fund charges upon outstanding loan expenditure and allowing 5 per cent. interest on the accumulated deficit of revenue derived from the port, as compared with expenditure upon it, this left a sum of Rs.636,817 accruing to general revenue at the expense of importers and exporters and the owners of shipping calling at the port.

Considerations of the general finances of the Island led to a further reduction in the funds voted for expenditure upon the port for the financial year 1930-31, the total expenditure voted being Rs.3,461,879. After these votes were sanctioned, the writer was called upon by Government to report what further reductions in expenditure could be effected without incurring undue risk to life or property in the port, and, as a result of this report, the expenditure authorized during the financial year 1930-31 has been further reduced to Rs.3,130,025.

On the basis of these estimates, the working of the port for the financial year 1930-31 should result in a sum of approximately Rs.823,680 accruing to general revenue.

Colombo's Shipping in 1930.

In 1930 a total number of 3,211 British and foreign vessels (sailing and steam) entered the harbour, as against 3,469 vessels in 1929.

The total number of merchant vessels (excluding sailing and coastwise) which entered the port in 1930 was 2,952, with an average gross tonnage of 7,102; the total number in 1929 was 3,228 with an average gross tonnage of 6,706.

On January 20th and July 16th, 1930, there were 26 ships in the harbour at one time. The largest number on record of ships in the harbour at one time is 36, on August 19th, 1919.

The largest vessel which entered the harbour in 1930 was the s.s. "Columbus" (length 749.5-ft.; beam 83.1-ft.; gross tonnage 32,565 tons).

The vessel with the deepest draught which entered the port in 1930 was the s.s. N.T. "Nielsen Alonso" (33-ft.), and in 1929 the s.s. "President Johnson" (31½-ft.).

Port of Colombo's Passenger Traffic.

The following figures show the total number of passengers embarking and in transit at the Port of Colombo during the last five years:—

Year	Total
1926	288,082
1927	322,466
1928	326,657
1929	300,493
1930	276,756

There has been a decrease in passenger traffic as compared with the preceding years.

Colombo Port Commission's Secretaryship.

It is understood that considerable disagreement has arisen in the Executive Committee of the State Council on Communications and Works on the proposal for the appointment of a successor to Mr. H. K. Hillyer, Secretary of the Port Commission. Mr. Hillyer is stated to be retiring from his post and, it is understood, the Government of Ceylon has proposed that the Secretary of State for Colonies should be requested to select a candidate to succeed him.

It is gathered that some of the members of the Executive Committee on Communications and Works have expressed strong disapproval of such a proceeding on the ground that more than one suitable candidate for the post is locally available, and that if there is an extreme necessity to do so a Ceylonese Civil Servant may be appointed to the post.

It is also understood that it has been pointed out to Government that, although it is stated in the Civil List that Mr. Hillyer was appointed by the Secretary of State for the Colonies, he was previously employed in Ceylon on the Legislative Council Staff. He was subsequently appointed to the post he now occupies. The initial salary of his present appointment was £600, rising to £750 a year. Under the Wood-Renton Fernando Salaries Scheme his salary was raised from £800 to £1,160 a year.

Notes from Far Eastern Ports—continued

No Reduction of Water Rates for Ships at Colombo.

Another appeal from the Chairman of the Colombo Port Commission for the re-consideration of his request for the reduction of the charges made for water supplied to shipping, has, it is learnt, been turned down by the Colombo Municipal Council.

A letter from the Chairman of the Colombo Port Commission was recently considered at a meeting of the Municipal Council, which has recommended that the Port Commission be informed that after comparison with rates charged at other ports in the East, it does not appear to the Council that the rates charged in Colombo are excessive, and that the Council, therefore, regrets that it cannot see its way to reduce the present charges.

It was not long ago that the Colombo Port Commission made a similar request to the Municipal Council regarding the rates charged for water supplied to shipping, which was rejected by the Council.

Point Pedro Lighthouse Improved.

A lighthouse with an automatic light which will be visible at a distance of 15 miles to ships and schooners approaching the Northern Coast of Ceylon has just been completed at Point Pedro.

The light is turned on automatically at sunset and turns itself off at sunrise. The old lighthouse at Point Pedro consisted of a white steel mast hoisting a green beacon light. It had a visibility of only three miles, and a lighthouse with a more powerful light had been in demand for a long time, owing to the large number of ships and schooners using the Northern ports of call.

The automatic light at Point Pedro is only a little less powerful than the Colombo Clock Tower lighthouse, which has a 300,000 candle-power light and can be seen at a distance of 17 miles in clear water. The Point Pedro lighthouse took nearly three years to build. It was constructed by the P.W.D. engineers under the direction of the Master-Attendant, Capt. E. C. Stubbs, R.N.

The Port Trust Proposal for Colombo.

The vexed question of the need for a Port Trust in Colombo is likely to engage the attention of the State Council before long. The Chairman of the Port Commission states in his administration report for last year that the Committee appointed to examine the question held thirteen meetings and will shortly submit their recommendations to Government. This was written early in March, and five months have passed without an announcement of the Committee's conclusions. It was reported some time ago that the Committee was understood to have decided by a majority in favour of a Port Trust. The minority, perhaps, objected to the proposal, for the reason that it would place the affairs of the Port outside the control of the Legislature.

Siam

Siam's Foreign Trade.

The monthly Customs returns for July-August show another huge drop over the same period last year in the value of imports, with the balance of trade still favourable, the total imports being Tcs.8,135,565 and the total exports Tcs.8,349,975.

Imports of general merchandise dropped from Tcs.11,226,937 in July, 1930, to Tcs.6,980,930 for this year. Imports of beer, wine and spirits dropped from Tcs.309,886 last year to Tcs.103,555. Government's imports of the same articles, curiously enough, jumped from Tcs.657 last year to Tcs.1,299 this year, and Government's import of opium also jumped from Tcs.676,614 last year to Tcs.683,716 this year—these two items being the only ones showing an increase in imports. Teak was down from Tcs.890,189 last year to Tcs.403,225 this year. Rubber also dropped from Tcs.1,520 to Tcs.386. Exports of other goods, however, was up from Tcs.2,171,003 last year to Tcs.2,327,359 this year. Tin exported from provincial ports was given as Tcs.1,242,633 this year against Tcs.1,405,588 for last year.

Kra Canal to be Constructed.

Several Siamese papers have enlivened the question of the canal across the Isthmus of Kra in Southern Siam in the past few days. One paper says that very recently a meeting was held at the Ministry of Foreign Affairs at which H.R.H. the Prince Regent, H.R.H. Prince Purachatra of Kambangbejar, Minister of Commerce and Communications, H.H. Prince Devawongse Varodaya, Minister of Foreign Affairs, and other Cabinet members were present and that the question of the "Kra Canal" was taken up once more officially.

According to public opinion, if a canal were to be constructed at the Isthmus of Kra, the place would become one of the

most prosperous ports in the East. It would be more important than Singapore, since all ships from Europe to the Far East or vice versa would pass through this canal, saving many hours travel.

Japan

Japan's Shipping Lines to Curtail Services.

As the result of decreased travel and freight movements, Japanese steamship lines are curtailing their services. The Nippon Yusen Kaisha is discontinuing its South America, Atlantic Service. The Osaka Shosen Kaisha is stopping its Puget Sound Service. The discontinuance of the two services has been expected since the N.Y.K. and the O.S.K. reached an agreement for co-operation recently. The agreement calls for elimination of overlapping services, joint purchase of supplies and general co-operation for economy and efficiency.

At the suggestion of the Ministry of Communications, a re-allocation of ships operating down the East Coast of Africa under Government subsidies, also was decided. This service starts from Yokohama and terminates at Burba. The O.S.K. will withdraw the Panama Maru, Mexico Maru, Canada Maru and Chicago Maru from this line. Following abolition of the Puget Sound line, the Manila Maru, Africa Maru, Hawaii Maru, Arabia Maru and Arizona Maru, will be transferred to the African line. Five ships withdrawn from the South American line will be transferred to the Java Service.

The O.S.K. also has decided to have its Osaka-Tientsin steamers call at Chefoo, on outward voyages, eliminating transfer of cargo consigned to Chefoo at Tientsin.

New Orleans shows Increases for August

The important relationship of inland waterways to the business of the Port of New Orleans is again demonstrated by figures released by the Dock Board. During August, 1931, despite unusually low water in the Mississippi River and its tributaries, 320 inland watercraft of over 25 tons arrived in port. These vessels had a total tonnage of 123,435 tons. This was an increase of 91 vessels and 29,733 tons over August, 1930.

The Industrial Canal was again the centre of great activity. During August, 1,245 vessels with a total tonnage of 416,393 tons used the Canal. This represented an increase of 394 vessels and 95,510 tons over the same month of the previous year.

Importations of bananas increased 5,529 bunches over August, 1930. During August, 1931, the Board's conveyors handled 1,344,739 bunches. Other commodities moving over the Port's wharves also showed substantial increases. Vegetable food products imported increased 32,251 tons, while other vegetable products imported increased 5,878 tons. Machinery and vehicles imported increased 238 tons and miscellaneous imports increased 293 tons.

Sea-going vessels arriving in port during August, 1931, numbered 203. There were 202 departures during the month.

The sea-going vessels which arrived during the month had a total tonnage of 808,505 tons. Vessels using the public wharves during August, 1931, had a total tonnage of 668,654 tons. Cargo paying tollage amounted to 263,211 tons.

Of the 203 sea-going vessels arriving during August, 105—almost 52 per cent., representing more than 54 per cent. of the total gross tonnage—flew the American flag. Honduras was second in number of ships and third in tonnage. Great Britain was second in tonnage and Norway third in number of ships.

The following is a tabulation of the number of sea-going vessels, showing gross tonnage and arranged by nationalities, which arrived during August, 1931:—

Nationality.	No. of Vessels.	Gross Tonnage.
American	105	443,987
British	13	92,347
Brazilian	2	9,871
Danish	5	13,222
Dutch	1	8,365
French	3	15,284
German	9	31,535
Honduran	32	89,224
Italian	5	28,504
Japanese	1	9,627
Nicaraguan	4	3,047
Norwegian	15	42,425
Panaman	4	6,895
Swedish	4	14,172
	203	808,505

Book Reviews

"DREDGING OF HARBOURS AND RIVERS." By E. C. Shankland, F.R.S.E. Published by Brown, Son & Ferguson, at 42s. net.

Very little has been written upon the subject of dredging and the author, in compiling this much-needed book, has undertaken a stupendous task, as it will be readily understood that in no other field or dock and harbour work is there such variance of conditions.

The book comprises 248 pages, which are sub-divided into five chapters and innumerable illustrations.

Chapter 1 is devoted to the history and principles of dredging, the varying types of dredgers, transformation of sea ports from dredging, and the relations of increased shipping trade to increase depth.

Chapter 2 concerns the hydrography of dredging, the marine surveyors' implements, determination of currents and river gauging, and the relation of dredged curves to the turning circle of large ships.

Chapter 3 is devoted to the characteristic and common features of river tides, the effect of flood and ebb tide on contours of parallel dredged curves, the deposition of silt in an estuary, range of tide in an estuary, position of wave crest at high tide period, and the effect of improvement of tidal rivers on the acceleration of time of high water.

Chapter 4 comprises practical problems in dredging, amongst which are the borings of strata to ascertain nature of excavation before dredging, types of apparatus employed, varying types of dredgers and functions, deposit of dredgings on land, performance of bucket dredgers in variable strata. The latter part of this chapter is devoted to grab dredging and notes on the utility of grabs in dock dredging work and the design of grab cranes. The chapter concludes with notes on the lubrication and care of dredgers.

The concluding chapter is chiefly devoted to the financial side of dredging plant.

Captain Shankland is to be congratulated on the presentation of his book, which will prove a valuable addition to any dock and harbour engineer's library. The subject is naturally an extensive one, and the author has most ably covered the subject in its many spheres.

"THE RECLAMATION OF LAND FROM THE SEA." By F. M. Du-Plat-Taylor, M.Inst.C.E., M.I.Mech.E. Published by Constable, at 21s. net.

The author, who is well-known as a consulting engineer, needs no introduction to our readers, and all who have to contend with coast erosion will not fail to glean some knowledge from this latest book of Mr. Du-Plat-Taylor's.

The book, which is a most interesting one, covers all spheres of reclamation from early days and also in various countries where coast erosion has taken place.

The book comprises 153 pages and is profusely illustrated, there being 83 photographs and drawings. There are nine chapters, the first of which deals with the objects and methods of reclamation. Chapters 2 and 3 are devoted to reclamation by enclosure. In chapters 4 and 5 the author gives examples of reclamation by enclosure, and these two chapters are really the most interesting in the book, as the large scheme of reclamation by enclosure of the Zuyder Zee is fully gone into. Chapter 6 is devoted to lay-out of reclamation areas, and chapter 7 reclamation by filling.

The author then devotes chapter 8 to the necessary plant required for reclamation, such as drag line excavators, bucket elevators, grab dredgers, hopper barges, etc. Chapter 9 details the necessary pumping machinery required for drainage purposes, and the book concludes with useful tables and data.

The author has gone to considerable trouble and care in the compilation of the necessary data included in the book, and is to be congratulated on adding yet another valuable book to the engineers' library.

Jugoslavian and Near Eastern Port Matters.

The Chamber of Commerce of Split (Jugoslavia) has published an interesting review of the situation of traffic at the various Yugoslav ports. It may be interesting to examine the following figures summarising the volume of goods unloaded and loaded at the chief Yugoslav ports in the course of the last few years:—

		Interior Movement		Foreign Movement		Total
		Imports Tons	Exports Tons	Imports Tons	Exports Tons	
Dubrovnik	1913	19,770	2,437	32,188	134,353	188,748
	1928	12,398	8,482	52,807	233,787	307,474
	1929	17,766	10,874	103,626	234,561	366,827
	1930	15,169	7,838	101,456	208,828	333,291
Split	1913	32,342	94,240	64,268	252,803	443,653
	1928	31,757	120,682	142,822	644,166	939,427
	1929	33,396	96,763	195,163	825,837	1,151,159
	1930	26,029	100,377	130,239	823,989	1,080,634
Sussak	1913	—	—	—	—	—
	1928	44,067	28,402	211,076	280,375	563,920
	1929	55,855	39,561	249,374	299,353	644,143
	1930	57,578	25,665	240,442	377,354	701,039
Sibenik	1913	25,657	50,071	31,911	106,400	214,039
	1928	25,066	22,268	30,326	234,869	312,519
	1929	10,055	15,605	14,620	191,739	232,019
	1930	7,079	14,480	19,173	184,114	224,846

It will be noticed that there has been a noteworthy progress between the pre-war and the post-war period in shipping in Yugoslav ports, but during the past few years there have not been many changes in the situation of trade. This state of affairs is explained by the fact that, while before the war shipping at Split, Sibenik, Dubrovnik, etc., referred only to the immediate requirements of their districts, these ports now

handle imports and exports for a certain portion of the Kingdom of Jugoslavia, and the importance of Split is due, above all, to the fact that in the district of that town there have been concentrated very important industries like the Portland Cement Factories, Oil Refineries, etc.

According to the statistics which have been published by the Minister for National Economy of Greece shipping at Greek ports during the first six months of 1931 included the arrival of 1,573 ships representing 2,666,777 n.r.t. and the clearance of 1,086 ships representing 2,071,382 direct from foreign ports, i.e., excluding coastwise trade. Of the ships arrived 491 were Greek, while the remainder were foreign. The first place among foreign countries is held by Italy with 460 ships, and is followed by Great Britain with 127 ships. Of the tonnage cleared 191 ships were Greek and the remainder were foreign. Among the foreign tonnage there were 427 Italian ships followed by 88 British ships. While ships arriving show an increase, ships clearing are showing a decrease compared with the same period of 1930. Since foreign vessels are showing an increase both in connection with arrivals and clearances from Greek ports, and Greek vessels are showing a decrease it is evident that the decrease in the clearances is due, above all, to the fact that many Greek ships which arrived at Greek ports from foreign countries have been laid up.

Obituary

During the past month death has removed several well-known figures from the commercial life of the North-East Coast. Mr. James Emery Tully, head of the ship-owning firm of Messrs. Ridley, Sons and Tully, passed away at the latter part of August. He was at one time a member of the Council of the Chamber of Shipping. He was elected a member of the Tyne Improvement Commission in 1903, and was a director of several local companies. Colonel J. Lynn Marr, who died at Sunderland, was a member of the River Wear Commission. He was managing director of Sunderland Forge and Engineering Co. and connected with a number of shipbuilding and ship-repairing companies.

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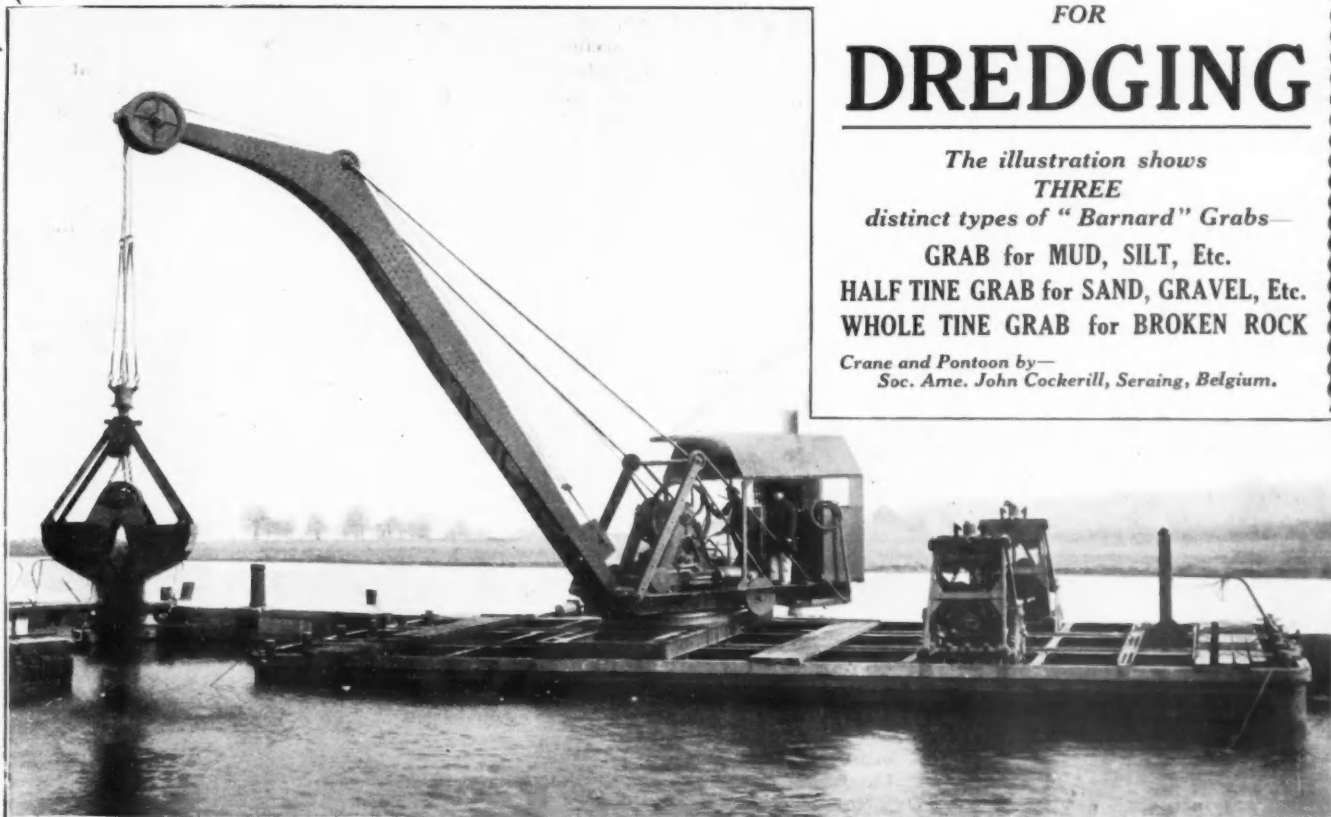
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Vickers-Armstrongs, Ltd.

Launch of the Destroyers "Cygnet" and "Crescent"

The destroyers "Cygnet" and "Crescent," under construction at the naval construction works of Messrs. Vickers-Armstrongs, Limited, at Barrow-in-Furness, were successfully launched on Tuesday, September 29th.

It was intended that Lady Field, the wife of Admiral Sir Frederick L. Field, K.C.B., K.C.M.G. (First Sea Lord of the Admiralty), should launch the "Cygnet," and the Hon. Lady Lawrence, the wife of General The Hon. Sir Herbert A. Lawrence, G.C.B. (Chairman of Vickers, Limited, and Vickers-Armstrongs, Limited), the "Crescent," but illness prevented Lady Field from travelling to Barrow and Lady Lawrence deputised for her and launched both ships. The Admiralty were represented, in the unavoidable absence of Vice-Admiral R. R. C. Backhouse, C.B., C.M.G. (Controller of the Navy), by Rear-Admiral P. L. H. Noble, C.V.O. (Director of Naval Equipment). Other important guests were: W. St. D. Jenkins, Esq., C.B., C.B.E. (Director of Contracts), and Mrs. Jenkins, Captain M. R. J. Maxwell-Scott, D.S.O. (Captain Superintendent of Contract-built Ships), E. D. Meryon, Esq. (Department of Naval Construction), Local Admiralty Officers associated with the construction of the ships, and British and Foreign Officers stationed in Barrow superintending the work in hand, and their wives. General The Hon. Sir Herbert A. Lawrence, G.C.B., Commander C. W. Craven (Managing Director of Vickers-Armstrongs' Works), Mrs. Craven, J. Callander, Esq. (General Manager), Mrs. Callander, H. Thompson (Commercial Director), Mrs. Thompson, and Principal Officials of the Barrow Works were also present.

A luncheon was held in the general offices of the works immediately after the launches, and was presided over by Sir Herbert Lawrence.

At the beginning of the year the Barrow Shipyard was relatively well off for work, but new orders have by no means kept pace with the output of work, and conditions as regards employment are becoming very serious. The only ships now remaining to be launched are the destroyers "Defender" and "Diamond," and the submarines "Thames" and "Porpoise," and by the end of the year—in the absence of new orders—there is bound to be a great amount of unemployment in the town and district.

The Pyrene Co., Ltd.

Demonstration of "Parkerizing" and "Bonderizing" at the Brentford Works of the Company

The Pyrene Co., Ltd., gave a demonstration last week of "Parkerizing" and "Bonderizing" at their works, which are situated on the Great West Road, Brentford.

"Parkerizing" is a method of treating iron and steel for the prevention of rust. The process is a very simplified one, inasmuch as the metal that has to be treated has only to be immersed in a bath of boiling water to which a powder called Parco has been added, and the time for the process is only a matter of about an hour. This procedure converts the surface of the metal to an insoluble phosphate and is impervious to rust under ordinary atmospheric conditions, and it is then ready for a final finish to complete the rust-proofing, which can be done by wiping the article with oil or dipping it in oil.

There is no limit to the range of articles to which this treatment can be applied and the list is far too big to enumerate here.

"Bonderizing" is a chemical priming process which changes the surface of iron or steel to a non-metallic coating which is an integral part of the metal itself, but, unlike metal, is sufficiently absorbent to ensure permanent cohesion with the applied coating of paint, lacquer or enamel.

A similar procedure is adopted to that of "Parkerizing," with the exception that the article is only immersed for a matter of about 10 minutes and that a different powder (called Bonderite powder) is used. During the immersion any surface rust is converted and the pores of the metal, which contain microscopic rust, are sealed.

After iron or steel has been "Bonderized" an ideal surface is provided for the application of paint, lacquer or enamel. The finish is permanently keyed to the metal, thus providing a rust-proof finish and maintenance of appearance.

Motor car wings and the various enamelled parts of a car are specially suitable for this treatment. Of course, there is a long list of other articles which can also be treated with this solution.

Any of our readers who would like further particulars of these two processes can obtain them by writing to The Pyrene Co., Ltd., Metal Finishing Department, Great West Road, Brentford, Middlesex.



A 50-ft. Standard Pile Driving Plant with the power-operated raking gear at work on a Bridge Abutment in Ireland. The maximum rake is 30 deg. from the vertical and the plant is mounted on rollers and fitted with a 2½ ton steam hammer, Spencer-Hopwood Boiler and a Zenith Winch.

Public Works Exhibition

The British Steel Piling Co., Ltd., to have a Unique Stand

The British Steel Piling Co., Ltd. of 54a, Parliament Street, London, S.W.1, are having a unique Stand at the forthcoming Public Works Exhibition. This will be built of their well-known "Larssen" Steel Sheet Piling. Every Civil Engineer and Contractor should make a point of examining the Stand itself as well as the exhibits. The number of the Stand is 57.

On the Stand will be shown "Wonder" Concrete Mixers, an "Epic" Hoist, a "Zenith" double-drum Friction Winch complete with boiler, and model Pile-Driving Plants. Demonstrations will be given by means of a miniature plant of the method of making and placing in one operation "Vibro" Concrete Piles.

Concerning the "Wonder" Concrete Mixers, the distinguishing numbers of the various sizes have been altered during the past few weeks. What was:

- No. 2½ "Wonder" becomes 4/2½
- No. 3 "Wonder" becomes 5/3½
- No. 4 "Wonder" becomes 7/5

This alteration has been deemed advisable because people were under the impression that Nos. 2½, 3, and 4 represented the batch capacities of these sizes, whereas the new figures indicate the wet and dry mixtures in the drum.

These mixers are made at the B.S.P. works at Claydon, Suffolk. In accordance with the B.S.P. policy to use only the best, Lister Petrol Engines are now being fitted to "Wonder" Mixers.

